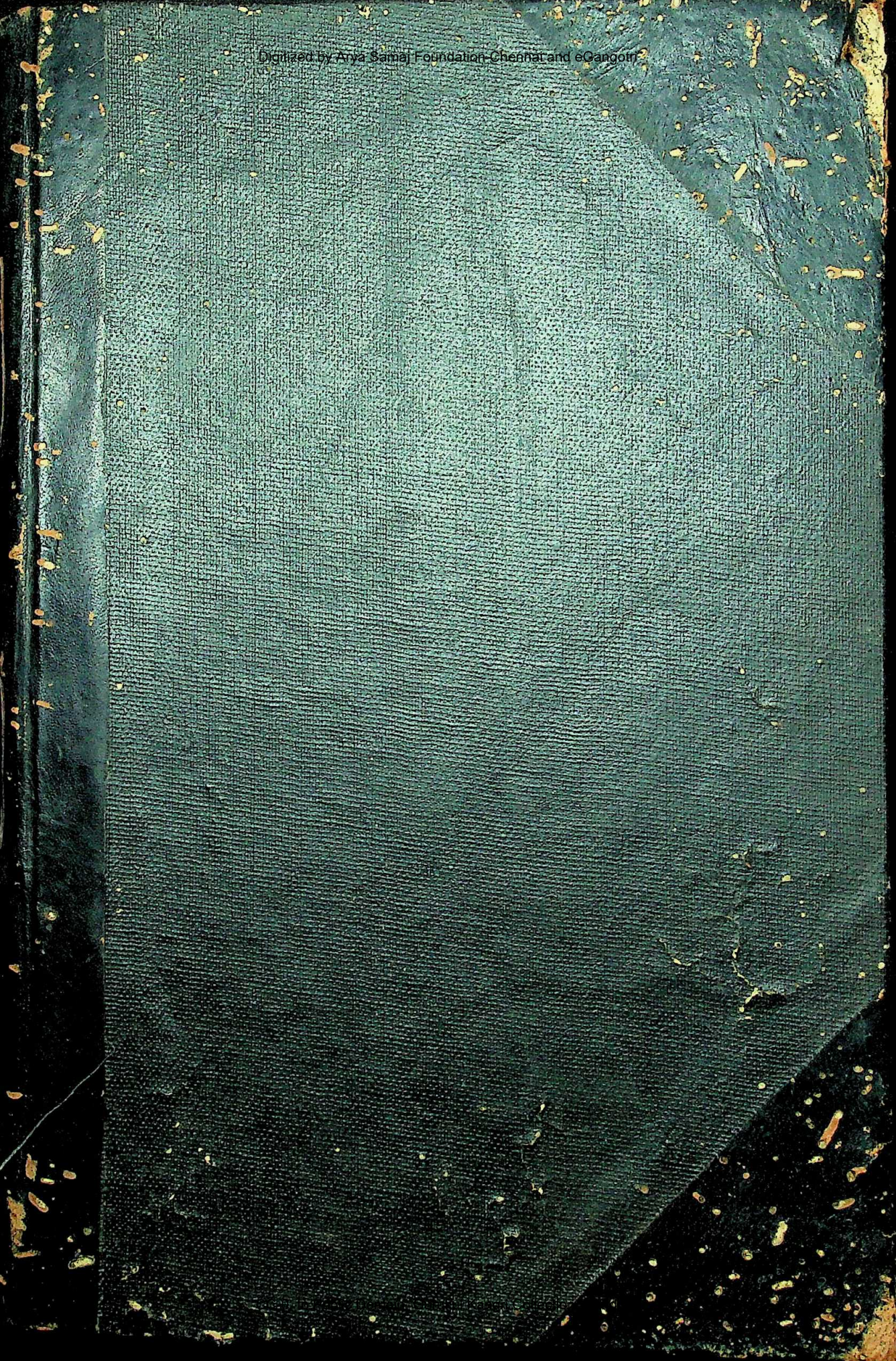




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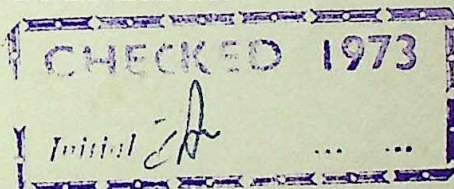
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ON THE EXISTENCE OF A NECESSARY BEING

THOUGH men make gods in their own likeness, the Godhead is not thereby exhausted. For, to evade the difficulties of the problem, "What God is," by a simple deification of man himself or of some element in Nature, and to deny the existence of the problem, "Whether God is," is but to cut the Gordian knot which intertwines these two problems. Unfortunately for modern thought, this has occurred and the problems remain unsolved. And, though few to-day accept Kant's epistemology, there are many who affirm unquestioningly that Kant has overthrown forever all arguments for the existence of a necessary, unconditioned Being. And this despite the fact that these same individuals refuse to accept the epistemology on which Kant's arguments are based.

In the streams of idealistic thought which flowed from the *Critique of Pure Reason* as from their source, there formed the notion of the "Absolute," the ideally perfect and infinite whole. But this notion of the Absolute as all-containing was found to be incompatible with any personal pluralism in which individual persons were anything more than mere parts of the whole. On the ground, then, that finite selves were relatively independent of the Absolute, the Absolute was in turn conceived to be not strictly absolute, but finite.

The existence of evil was another stumbling block before the Absolute Idealist. If the Absolute was to be perfect and all-containing, it was more than a Herculean task to explain how evil could possibly exist in the universe, in the Absolute. So, from the ethical approach as well as from that of personal pluralism, some modification of the notion of the Absolute to that of a finite God was necessary.

Even more direct to the same end was the course of those who attached themselves more particularly to the *Critique of Practical Reason*. For the "practical reason" deals directly with experience. And experience is only of Nature. Then, for God to be knowable He had to be Nature or an element in Nature, hence finite.

The Kantian tradition has thus led directly to the notion of a finite God. And, with the acceptance of the notion of a finite God, the problem of the existence of God, "Whether God is," is shunted aside as irrelevant, or, at least, as unimportant. For a finite God

can be known with ease in the same way as any other element in the universe. Reason has been cast aside; for God is to be found in "practical reason," in mystic states, in intuition, in religious experiences, in one source of knowledge or another, or in some need or affection. The sole important problem is then that of the nature of God. Is He Progress, Love, Value, Service, Nature, Perfection, or some other deified element of Nature?

This notion of God as finite has resulted directly from the modern method of procedure, from the "interiority" of modern thought. For modern thought has reversed the traditional order, and begins with the discovery of all objects of knowledge in the epistemological ego, and then attempts, by a sort of epistemological gymnastics, to lift the knower up by his boot-straps, and thereby externalize the objects of knowledge back to the place where they were originally observed, outside of the subject knowing. To argue to the existence of God in this non-traditional spirit, it would be necessary first to enrich the knowledge of the self, and then, if possible, by that means come to a knowledge of the real world and of God. This method of "interiority" has naturally resulted in many vagaries: analyses of subjective elements of knowledge have been erected into metaphysical dogmas without due attention to that other equally important basis of a metaphysics, the analysis of the real objects of knowledge. Thus, those "Interiorists" who fail to externalize their knowledge of the real are the Idealists, and their God is the Ideal Absolute, the perfect and ordered unity of the multiple elements in knowledge. And those "Interiorists" who succeed in externalizing Nature are the Realists, and their God, when they recognize one, is some element in Nature, or Nature itself. Things have thus been called Gods, but calling a thing God does not make it so. Indeed, if moderns insist on criticizing the traditional notion of God as anthropomorphic, the traditionalist might well reply that the moderns have "theomorphized" Nature.

The traditional philosophic method was one of "exteriority." Thus the Ancients and the Scholastics proceeded from one object of knowledge to another. Metaphysics meant literally "beyond" and "after" physics, it was a study of the real world. And this "exteriority" (this analysis of the objects of knowledge) is prior to "interiority" (the analysis of the subjective elements of knowledge) in this sense: the notions and arguments dealing with God and with Nature ought first to be examined on their factual or objective side, i.e., metaphysically, and only thereafter treated epistemologically, in relation to the subject knowing.

The traditional notion of God maintains that God is a necessary and self-sufficient Being. God is, Who is. By His very nature God

exists. Hence to say that God exists, but could be non-existent, would be self-contradictory, would be contrary to the logical necessity involved, for the notion of God is that of a Being that necessarily exists. Though this notion does not in any way prove the existence of God, it does signify that, if God exists, His essence and existence are so closely related that His existence follows directly out of His essence. So that, if any one knows the essence of the necessary Being, he knows also on what account the necessary Being exists.

But this traditional notion of God does not imply that of all-containing; God is simply self-sufficient and necessary. Therefore personal pluralism, so far from being a difficulty for the traditional notion of a necessary Being, is one of the premises on which its argument is based. For the notion of necessary Being in no wise implies that persons are mere parts of the whole which is necessary Being. Nor is the universe with its evil in any sense a blot on the perfection of God, for the universe, though dependent on, is distinct from, the necessary Being.

The traditional argument of most weight for the existence of God is generally accepted to be that based on the contingency of the universe. It might be stated thus briefly:

Consider any existent. It is either (1) unconditioned or (2) conditioned.

(1) If it is an unconditioned existent, then it is self-sufficient and necessary, for an *ens a se* is always an *ens necessarium* and vice versa. An unconditioned existent has no external condition for its existence. Then neither can it have any external reason for its existence. But it must have a sufficient reason for its existence. And this sufficiency must be within since it is not from without. Therefore an unconditioned existent is self-sufficient. And if self-sufficient, then necessary.

(2) In the second alternative, if the given existent be conditioned, there still must be an unconditioned being. For all existents can not be conditioned.

For, in this alternative that the given existent is conditioned, this conditioned being must have conditions for its existence in such a way as to constitute a series of conditioned existents. Without denying the possibility that this series of conditioned existents might be endless and infinite, the traditional argument maintains that, even though each member of the series causally explains the existence of the member or members dependent upon it, nevertheless the series as a whole, and as containing all conditioned existents, is insufficient to explain its existence as such. The traditional argument maintains that this is true, regardless of the number of members of the causal series, whether the number be finite, or infinite and endless. The

argument proceeds from the fact that each individual being is conditioned by another existent to the fact that each individual being is contingent, not necessary. Hence the series as a whole is contingent. But there must be some sufficient reason for the existence of the series as a whole. And this is to be found only in a necessary, self-sufficient being. And if this being is necessary and self-sufficient, then it is also unconditioned.

It is to be noticed that this unconditioned being is not a first cause in the sense of temporal antecedence; this argument is not concerned with the problem of the eternity of the universe. Instead of proving a beginning or creation of the world, this argument attempts to prove only that a necessary, unconditioned being exists as the reason for the existence of all conditioned existents, and thereby satisfies the Principle of Sufficient Reason. If each term of a series is conditioned and contingent, then the series as a whole is conditioned and contingent. Though the individual causes explain their individual effects, the contingency of all the causes together remains unexplained. The existence of the entire series is to be explained only by the existence of a necessary being, for the contingent members of the series do not satisfy the Principle of Sufficient Reason.

Kant's chief objection to the argument from contingency was based on the notion of totality he employed. He recognized but two types of totality, the empirical totality of a "successive synthesis" and the *a priori*, transcendental, and subjective synthesis. But, according to Kant, the notion of "all" as used above in reference to all conditioned existents would be that of an empirical synthesis: "The conception of totality itself is in the present case the representation of a completed synthesis of the parts; and this completion, and consequently its conception, is impossible."¹ Kant explains the two types of "successive synthesis": "I shall term the synthesis of the series on the side of the conditions—from that nearest to the given phenomenon up to the more remote—*regressive*; that which proceeds on the side of the conditioned, from the immediate consequence to the more remote, I shall call the *progressive* synthesis."²

"But the notion of "all" as employed above in our argument is not the totality of successive synthesis as Kant claimed. Nor need it be. The universal of "successive synthesis" is merely the empirical universal of limited extensibility in which we have experienced or can easily empirically verify the totality of the inclusion. "All the words on this page" would be an example of this type of totality. It is this kind of universal which is employed in examples of what has been called perfect induction. There is another type of universal, however, the universal of indefinite extensibility, where the denotation

¹ Kant, *Critique of Pure Reason*, Meiklejohn translation, p. 342.

² Kant, *ibid.*, p. 328.

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includes all the members of the class, known or unknown, so long as they answer to the essential characteristics of the class. Practically all our scientific judgments are stated in terms of universals of this kind. Though all existing water has not been analyzed, nor probably ever shall be, all water is H_2O . And this analysis is valid not only for the water that has been already examined, but for all water whatsoever, wherever it be, so long as it is water. The analysis of all the water in the Pacific Ocean would not make this judgment one fraction more probable. Scientific investigation, in its examination of particular instances, comes to the conclusion that it is the nature of a given thing to be such and such. It then extrapolates beyond the known instances for which it can formulate an empirical universal and states that, no matter how many there be of this type, whether of finite or infinite number, all the members of the class (and not merely those which have been examined) possess certain properties. In cases such as these which define the nature of things, probability does not merely approach a definite goal, but actually attains it.

Kant has claimed that the universals of indefinite extensibility are transcendental, good only for the realm of phenomena, and hence are practically subjective. Kant argues that, since this universality is not experienced, it is supplied by a form of the mind, the category of totality. Kant argues further that "successive synthesis" is possible only in the case of a finite number, that it is impossible in the case of an endless, infinite denotation. For he claims that the concept of totality in the case of an endless series is that of successive synthesis, the completed synthesis of the parts; "and this completion, and consequently its conception, is impossible." We admit with Kant that the completed empirical synthesis of an endless series is inconceivable and impossible. But, opposed to Kant, we believe that the universal of indefinite extensibility can legitimately comprise even an infinite series, both collectively and distributively, and that, not by reason of any empirical synthesis, but by reason of the nature of the things examined, by reason of the Uniformity of Nature. And hence this universality is not something merely subjective and transcendental, but objective, since it is based on the very nature of things as they exist. Our notion of totality as used in the argument is not that of "successive synthesis." Yet it has objective reference, and can legitimately be used both collectively and distributively. It has just as real a denotation, and is just as much a concrete universal as is any empirical universal, though it does not touch the question of the actual quantity, whether infinite or finite, of the conditioned existents. They may be either of infinite number, or a successive synthesis may be possible. Nor does our notion of "all" bear on the

question of the spatial limitation or infinity of the universe; nor on the problem, whether the universe had a beginning or is eternal. The solutions of these latter problems are, perhaps, philosophically uncertain.

Another alleged difficulty faced by the argument from contingency is based on its use of the Principle of Sufficient Reason. Professor Arthur O. Lovejoy,³ Professor William Savery,⁴ and the philosophers of emergent evolution in general, raise the question or expressly deny the universal validity of this principle.

The Principle of Sufficient Reason of things may be stated: Everything which exists must have a sufficient reason for its existence. The validity of this principle, unlike that of the Principle of Contradiction, is not immediately intuited. It is not an axiom. Its validity is conditional on the explicability of things. Everything which exists must have a sufficient reason for its existence, if it is not to be inexplicable.⁵ The Principle of Sufficient Reason is then based directly on the Principle of Explicability: Everything which exists is by nature explainable.

This Principle of Explicability expresses a very firm conviction of all thought. And it is based on the nature of science and of things. The structure of thought is such that it demands an explanation for everything. And the nature of things is such that it corresponds to the veridical explanations of science. All human science seeks, as far as possible, to erect factual verifications and deductive proofs for the relations which exist between things. And a scientific explanation is deemed to be true if it corresponds to the ultimate nature of things.

In this relation between the nature of science and the nature of things is seen the fact that the laws of science, of thought, are also the laws of things. This necessary assumption, trust, and hope of the intellectual enterprise is fundamental to the possibility, meaning, and validity of science. Science assumes that its expression of facts and laws on the one hand, agrees in the main with the fundamental laws of the world of reality on the other. But this conviction is not an immediately intuited axiom, nor can it be deduced from any more fundamental principle already known as true. It can only be verified by the pragmatic sanction, it works. As in the factual verifications of certain mathematical deductions of Einstein.

But the Principle of Explicability in no wise implies that all knowledge is necessarily veridical, nor that science need be capable

³ Cf. "The Meanings of 'Emergence' and its Modes," *Proceedings of the Sixth International Congress of Philosophy*, pp. 20 ff.

⁴ Cf. "Chance and Cosmogony," *Proceedings and Addresses of the American Philosophical Association*, 1931, pp. 165 ff.

⁵ Cf. Dr. Franz Sawicki, *Die Gottesbeweise*, Paderborn, 1926, pp. 29 ff.

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of ultimate, minute exactitude. The Heisenberg Principle of Indeterminism, for example, does not in the least deny the Principle of Explicability (it is itself an example of scientific explanation) but merely sets limits to the possibility of exact measurements of velocity, if the position is given, and of position, the velocity being given. And, though science has erred in its explanations at times, these very errors were explanations. The Principle of Explicability signifies merely that the relations between knowledge and things are such that knowledge can express, and at times actually does express and explain, objective facts.

The explicability of things is thus limited by its expression (Heisenberg), and by its possibility of error. Moreover, science does not pretend to have explained all things rightly, but only assumes that knowledge is explanatory by nature. These limitations, then, do not invalidate the universal applicability of the Principle of Explicability. But, in recent times, this problem of universal applicability of scientific explanation has been resurrected. Thus, to Lotze's questions, why there is a world at all, and why the content of the world is what it is and not something else, why the world is not in rest but in motion, and why motion is in one direction and not in another, Professor Savery replies, "The answer to all of them is: there is no 'why.' . . . Instead of Leibniz' famous dictum, we may say that everything happens without a sufficient reason. . . . Recently I heard a group of scientists express their dissatisfaction at our not being able to explain the ultimate customs of nature. They had not learned Hume's lesson, which is not that we are unable to explain, but that there is no explanation. . . . That hoary old pseudo-axiom of Aristotle and the Scholastics that the causal stream cannot rise higher than its source belongs to the pathology of human thought."*

Professor Savery thus makes an exception to the Principle of Explicability in favor of some of the fundamental problems of philosophy and states that they have no explanation. *He then proceeds to offer his own explanation*, to state his cosmogony, the cosmogony of Chance. Similarly, for those who postulate a primitive Chaos, it is demanded of that Chaos that it have within it, or outside of it, some potentiality, some power whereby its development to its present state is explained. Chance and Chaos are themselves explanations, hypotheses, which illustrate the fact that it is the very nature of knowledge to explain, and the nature of things to be explained. Without explanation, even philosophy itself has neither validity nor significance. For philosophy is a science. And sciences explain.

* "Chance and Cosmogony," *Proceedings and Addresses of the American Philosophical Association*, 1931, pp. 165, 163.

Another premiss of our argument is the observed fact that entities existing in the universe are conditioned by other things and events. Consider the paper on which these words are written. This paper would not now exist were it not for the anterior existence of some fibrous substance from which this particular sheet of paper was made. And this fibrous substance could not have grown had the sun not given off its heat, had rain not given the plant sufficient moisture, had it not been for the existence of thousands of contributing factors in the history of the universe. Furthermore, this sheet of paper would not exist here and now except for the existence of some individual who operated a certain machine on the day on which this sheet passed through the machine. And these individual things and persons were in turn conditioned in a similar fashion by other individual conditions, both persons and things. So, when we refer to conditions, we are referring to existent things and persons (the sun, plants, rain-drops, workmen, machines, etc., as in the above example) without which any given conditioned existent could not have existed. If the former had not existed, then neither could the latter. As Baldwin defines it, a condition is a "*sine qua non*, an 'essential' thing or event without which another (conditioned) being cannot be."

Though all conditioned existents are contingent existents, we can distinguish between conditionedness and contingency. Conditionedness signifies merely the dependence of one being on another for some particular determination or determinations (quality or qualities), dependence on other existents for its existence in its present, determined form. Contingency, on the other hand, implies that a being is not necessary, that it does not contain within itself the sufficient reason of its existence, that it demands the existence of another existent fully to explain, not its determinations, but the fact that it exists at all. But all conditioned existents are contingent, for, if any existent has or has had external conditions for its existence as it now exists, then that existent is not a necessary, self-sufficient existent, but contingent.

The necessity and the unconditionedness of existence are similarly distinct: a necessary existent is one which has within itself, in its very nature or essence, the sufficient reason for its existence; an unconditioned existent, on the other hand, has no external conditions for its existence. But if any existent has no external condition for its existence, then it must contain within itself the reason for its existence (The Principle of Sufficient Reason). Then any unconditioned existent is also a necessary existent. And vice versa, for if a being exists by its very nature, it does not depend on another being. In the traditional statement of the argument from contingency,

as above, the Principle of Sufficient Reason is conceived as demanding the existence of a being *outside* of the series of *conditioned existents* in order that the fact of their existence might be explained. To this it might be objected that a sort of reification is involved, that the Principle of Sufficient Reason demands only the existence of some inner logical necessity, some law, and not at all the existence of another being. Though we believe that the Principle of Sufficient Reason might legitimately demand the existence of a being outside of the series of conditioned beings, we think that the following presentation of the argument, based on the discovery of the necessary Being *within* the series of *conditions*, avoids this difficulty, in part at least, for the conditions are given as existent.

Considered distributively, we have observed that some, at least, of the conditions of any conditioned existent are externally conditioned.

Considered collectively, outside of all the conditions of any conditioned existent, there exists no condition. Therefore all the conditions of any given conditioned existent must be externally unconditioned.

The sufficient reason for the existence of any group of beings must be found either within the group or outside of the group. But the sufficient reason for the existence of all conditions is not outside of the group for there are no conditions outside of all the conditions. Therefore the sufficient reason for the existence of all the conditions, considered collectively, must be somewhere within the group. In other words, the group of conditions must have its self-sufficiency, its necessity, somewhere within the group.

We are given, then, that, considered distributively, some at least of the conditions are externally conditioned, and that, considered collectively, all the conditions have their self-sufficiency, their necessity, somewhere within the group. There are now but three logical alternatives: either this group of conditions is self-sufficient as a group, while each and every individual condition is contingent; or each individual is self-sufficient; or the self-sufficiency of one (or more) conditions is the sufficient reason for the existence of all the conditions.

The first alternative is impossible, for if all the conditions as a group are self-sufficient, then one, at least, of the conditions is self-sufficient. For contradictory attributes can not be predicated of a group as a group and all the individual members of the group, if the attribute predicated of the group be a positive quality.

The second alternative is equally impossible, for some of the conditions were given as conditioned; and a conditioned existent can not be self-sufficient, therefore each and every condition can not be self-sufficient.

The third alternative then follows, that one (or more) conditions are self-sufficient. But if this existent is self-sufficient, then it is necessary; and if it is necessary it is unconditioned. It is an *ens necessarium*, an *ens a se*. Following the principle that beings are not to be multiplied without reason, and in view of the fact that there seems to be no important reason why there should be more than one unconditioned being, and in view of the fact that the order in the universe would be more difficult to explain if there were more than one necessary being, it may safely be concluded that there exists one, and only one, unconditioned, necessary Being.

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BOOK REVIEWS

Les deux sources de la morale et de la religion. HENRI BERGSON.
Paris: Félix Alcan. 1932. Pp. 343.

A un dieu, qui regarderait d'en haut, le tout paraît indivisible, comme la confiance des fleurs qui s'ouvrent au printemps (p. 222). M. Henri Bergson has known better than others the art of lifting thought to those levels from which, godlike, it might contemplate "the whole," and sense whatever might lie therein of unity and "intention." What hint of ultimate meaning life's developing gesture should convey to a thought thus elevated and inclusive, has been argued in previous volumes, well known to the public and prized; their theory is, that nothing but an implicit faith in some felt promise of fulfillment could have sustained life in its continued effort as, one after another, its expedients failed, and left it in check. In the manifold forms of life now lying about us, we see the final answer to so many experiments in living; for as many as are these forms, just so many will have been the expedients devised by life to circumvent material obstacles set in the way of its attainment. One now looking back on the courses of evolution may know by definite signs which of life's many inventions have been destined to prove unavailing: every biological species now perpetuating itself in endless reproduction marks the end of some once living hope. And one looking out on the results of evolution, shall he not see in the world about him only this: an aggregate of immutable species, of one or the other of which each "individual" life is but a specimen and example? Certainly, he may well say this of all forms of life save one. That one is still in question. It is with this question that the present volume opens.

The future of life is in the hands of humanity, but what humanity may make of life must depend in large measure on what life has made

of humanity. This last achievement of the evolutionary urge lies at the extremity of one of two great lines of development along which life will be seen to have made its way. Two lines, we say, for however many the expedients the urge to live will have devised to the end of fulfilling an intention immanent in its beginnings, these may all be viewed as variants of one or the other of two main suggestions: the one looking toward the perfecting of *instinct*, the other, toward the development of *intelligence*. Life, following either suggestion to the progressive neglect of the other, has evolved, on the one hand, the insect; on the other, man. The difference of result is seen first of all in the contrasting biologies of bee (let us say) and man; but one will miss little that may be of importance to an understanding of either nature, if he let his reflection begin by contrasting the social organizations of the two. For "a social life [no less than a biological structure] is immanent, as a vague ideal, in instinct and intelligence alike; and this ideal finds its most complete realization in bee-hive or ant-hill on the one hand; in human societies on the other." Human or animal, a society is always an organization; but how different the organizations effected by instinct and intelligence respectively! In the hive or the hill, where the individual is chained to his task by his very structure, the social organization is relatively invariable; in the cities of man, the organization is variable, and open to every possibility of progress. "In the first, every regulation is imposed by nature, it is necessary; in the second, but one thing is natural—the necessity for regulation" (p. 22).

The contrast is striking enough, yet so far from complete, that all man's moral struggles are consequent on a contention between that in his nature which would complete it, and that which would destroy it quite. On the outcome of this conflict of human nature with itself, depends man's chance of producing a life more developed than his own. To understand this, one must go back a little: when it was said, the bee is instinctive, man is intelligent, the meaning was not that either is wholly one or the other; in each there is something of both. So that, if in the world at large the instinct-made hive contrasts with the intelligent city, no less in the nature of man will an instinct to reduce cities to hives oppose the intelligence that would expand "hives" into a world. This strife of two faculties in man has been taken for the warring of a "moral instinct" with a libertine desire. But it is not that. It is indeed a struggle between an instinct to hold, and a desire not to be held; and this struggle does involve the oldest of moral issues. But the instinct is for social stability, not for moral laws; and the desire is for social liberty, not for individual libertinage. Nevertheless, on the outcome of this struggle does hang the fate of old moralities, and the prospect of new.

manities; for all moralities sacrifice the individual to the good of the city; while all chance of progress depends on the individual having his way. If old instincts win, evolution is at an end; if new intelligence triumph, moralities must go. Of the two, which is the worse: a social order that forbids progress; or a human progress that disrupts society?

But, of course, there is an alternative, in logic at least: if an old order is to be changed, it may as well be into a new one, as into a state of no order at all. One might expect our author to have made this suggestion his own; to have let that intelligence which marks us as the highest, make us progenitors of a higher; to have let it subdue those instincts that having served the thoughtless bee, can but deserve the thoughtful man. One might suppose an intelligence high enough to have grasped, might be trusted to reduce the high price of morals; or, better, to discover the cause thereof and remove it. M. Bergson does indeed realize this possibility, does let intelligence search for this cause, and with little difficulty find it; but therewith, his faith in the power of intelligence to open a way for progress comes to a sudden end—the cause it so readily discovers is beyond its science to remove. This cause lies, of course, in the demands made upon the individual in the name of social cohesion; and “who does not see this social cohesion to be due in great part to the necessity under which a society exists to defend itself against others?” (p. 28). The instinct to live in walled cities, if it succeed in producing one, must result in producing many; and that, in a world whose resources yield far more “publics” to clamor for its “goods” than goods to appease its publics. The consequences to each citizen, of each such tight republic, the least intelligence can foresee; but can the greatest science avert them? The obvious suggestion is, that man taking thought on his condition should throw down the walls of his cities and open them out on a world all amene and friendly. But to M. Bergson’s understanding of men, this theoretically sound suggestion could have no practical sequel. To realize a world socially wide open, man would have had to learn a love as yet unknown to him—a love of all his fellows. True, one might suppose this love, however inclusive, to differ only in scope from loves already known; man’s present nature, as instinct and intelligence have formed it, permits him to love some of his fellow-mortals; why should not his future, guided by intelligence alone, bring him to a love of all? This might be so, were it not for one thing: man’s natural affection for some is conditioned on his hatred of others of his kind. If city can contend against city no longer than neighbors are friends, so neighbor can be friends with neighbor no longer than cities contend; and “it is only as against all other men that one loves the men one lives with” (p.

28). One implication is plain: any love of humanity to which man's nature may attain must differ from the neighbor-love his present nature knows, not in scope but in kind of affection. Wherefore, "not by progressive stages shall we come to a love of humanity, having taken in family and nation on the way; rather, at one bound must we be carried beyond it, and to have reached it, must have surpassed it, without ever having made it our goal" (p. 28).

To have taken humanity lovingly in on one's stride to a "something beyond" is no new account of an experience which, whether born of thought or of feeling, is properly to be called *religious*. Indeed, the two most opposite philosophies that have disputed their way through history would seem religiously to concur in our author's immediate conclusion, that "only through a love of God, and in God, can man be brought to love humanity." Yet throughout the past, these philosophies that equally recognize God as the Prime Mover of all that moves in Nature, have felt themselves completely at odds as to their conceptions, both of God and of the love that moves the elements of their equally God-loving worlds. For the religion history has called Aristotelian or rationalist, deity speaks to the intelligence of man with argument; if man's reason and science can show him no supreme and ultimate end which to be truly blessed he ought to make his god—then man must remain godless. For the religion that may be called Prophetic or mystical, God speaks to the heart of man in a still small voice; if this whisper be not enough suddenly, and for no debatable reason, to change the nature of man, to move him in new ways—ways whose *whither* he forgets to ask, in his confidence in their *whence*—then humanity is beyond redemption. One may hope before the end to return to a thought on these two ways of philosophy; the past will have kept them religiously apart; perhaps the future may not. For the moment, it is enough to note that our author is not one who would reconcile them; Bergson is a mystic whose mysticism is as unspoiled as can be by Aristotelian motives (pp. 257–261). To his understanding, if life is ever to develop a humanity in love with God and, through God, with man, it will not be the continuous thinker, but the sudden prophet who, himself deeply moved, shall move humanity with him. For this reason, if the future is to be of humanity's making, it is not man's intelligence that shall shape it: no measure of science can produce genius. But if man's science can not assure, yet his hope may well look forward to a future that shall repeat the past; and what past has long been without its prophet? Throughout the ages have appeared one after another of those "exceptional men" in whom the love of humanity is incarnate (Greek sages, prophets of Israel, arahants of Buddhism, Christian saints), and it is to these men the world has ever turned for the guidance of its moral life (p. 29).

What is there then so "exceptional" in these mystics and messiahs of the past, that their world should have turned to them religiously for the guidance of its life; that our world should center its best hope on the reincarnation of their spirit? That the practical life of humanity has often been changed by the precept and example of its seers, all will admit; that it has invariably been changed for the better, many will doubt—or will at least be curious to learn how one may tell. That a humanity looking to the coming years with an *exoriare aliquis* on its lips is not likely to be disappointed one may take for granted; but how the man of the future is to know better than the man of the past what gospel to follow, one may well wonder. Now, a mystic would not be intelligent who did not ask himself this question; but he would not be a mystic did he trust his intelligence to answer it. Yet if he put not his trust in intelligence, he must invest it elsewhere; it is his faith in a something other than science, a something intelligence can in no wise produce, but only at best release, a something that when released must make for life's advancement—it is his faith in this something beyond understanding that distinguishes the mystic from the rationalist of all history. What, then, for a modern mystic will be this something beyond all science?

To reduce to brief argument a text enriched with every beauty of historical illustration, is a task one undertakes reluctantly; constrained to it, perhaps his best beginning is to return to that intelligence which was left questioning the cost of a certain moral order into which man's primitive instinct had organized him. None will suppose this social question to be the only one intelligence can find to ask of life as evolution's last experiment has contrived it: there is this bondage, of course, but there is also death, there is also the myriad deaths men's hopes die daily. The privilege of seeing all this, is the benefit conferred on man by his possession of that intelligence which elevates him above other life; the instinctive bee, spared this organ of discontent, is left to live and die in uncomplaining peace. Yet humanity could not have so long survived, had not some remnant of that huge energy which urged on life's beginnings sustained its last achievement in a disenchanting repetition of its days and generations. Not that much energy would seem to be required to preserve humanity in mere patience of life; not, certainly, if we may suppose man gifted with the talent we sometimes attribute to him for supporting himself on dreams. And our author does suppose humanity so gifted; along with, or perhaps commixed of, the instinct and intelligence already noted, nature has endowed its highest product with a faculty peculiar to these heights: a genius for "fabrication." Only by invoking such a faculty can one account for the phenomena of historic religions, those "static religions"

whose gods and immortalities seem to have been invented expressly in response to the objections intelligence so justly urges against the continuance of life as it is. Nor need one look elsewhere for the source and origin of this life-sustaining activity than to that life-developing impulse, in confidence of whose intention life began; for if humanity, in spite of its intelligence, is somehow encouraged to endure, what should there be to urge it on save that which has urged all life on? Indeed, some special form of heartening, apt to withstand a special form of disheartenment, is what we should expect of life; "for it is optimistic, this impulse to live," and if in increasing man in intelligence it find itself to have diminished him in confidence, shall it not be active in restoring the balance, so essential to its ends, that it itself has upset? Consistently enough, then, our author explains the varying phenomena of "static religion" in one and the same formula: they are "nature's defensive reaction" against that accusing intelligence of man, which points to the margin of accident attendant on his every enterprise; that discouraging margin against which no foresight can avail to bring his hopes to realization (p. 147, cf. pp. 127, 137). Yet it must not be supposed that to have explained in this way the phenomena of historic religions is to have dismissed them as idle illusions: they may belong to false religions, they are none the less truly religious. It is their source that dignifies them—they are *nature's* reactions against intelligent despair; it is their remoteness from this source that falsifies them—they are left to answer intelligence in the idiom of intelligence itself. In the end, one may come to look back on this moment, when humanity first turns to the nature within it for strength to carry on, as the initiation of a last experiment in living. If so, it will be because one has watched religious experience deepen, religious expression change; has seen the one come to a more intimate sense of its source, the other grow to a new eagerness for fulfillment. So at least our author would explain and interpret the evolution of religion; from the sensualities of primitive "mysteries," through the incomplete, passive mysticisms of later Greece and of India, to the completely active mysticism of those greatest of world-reformers, the Prophets of Israel, the Founder of Christianity, the Christian Saints, one "indivisible" genius grows in depth of experience, increases in transforming influence (pp. 227-251). What is this genius, whence comes it, whither does it tend? To answer these questions is to come to the doctrine's end; for the last is the very one that gave the enquiry beginning.

"What," it was asked in the beginning, "of the future of life, if its future lie with humanity, and if humanity be no other than the thing the past must have made it?" The answer would be, *with-*

ing; *nothing*, that is, if the humanity evolution has produced be endowed with no other resources than such as have so far been considered; an instinct, namely, that asks no questions; an intelligence that finds no answers; a gift for self-delusion. But is there not, should there not be in the depths of human nature some element other than these? Instinct holds us tight in the present; intelligence makes us anxious for the future; is there nothing to unite us with the past? Who says the past, says enthusiasm; for the past must have held an overwhelming enthusiasm for life to have let it fight its upward way from its vaguely animate beginnings to its Platos, Aristotles, and beyond. But shall the energy that has so toilsomely produced the heights of humanity have entirely died out in its product? That it has not, our very gift for "fabrication," for imaginative creation, has gone far to show; in this more than reproductive activity, nature's original urge will once more have made itself felt; though, now, all too remotely. Is there, then, no way in which man's remoteness from the source of life may be diminished, his intellectual timidities overcome, his courage to progress renewed? Surely, "to a god who should look down from on high," with the spectacle of "the whole" before him, there must suggest itself one way. "Why," namely, "why should not man recover the confidence he now lacks, or that reflection may have shattered, by reascending the stream, to seek replenishment of life in the direction whence life came?" (p. 226). To be sure it will be asked (much as once it was asked, Can a man enter a second time into his mother's womb, and be born?), How remount the stream of time, to drink anew at a source whose being is of the past? But from an experience of old mysticisms, one may anticipate the answer of new: it is not by following the way of intelligence that life shall be renewed at the source; "intelligence would rather tend in the opposite sense; it has a special destination, and when it rises to its heights of speculation, it lets us at most conceive possibilities, never does it touch a reality." But "we know that intelligence retains about itself a margin of intuition, vague and evanescent. Might we not fix this intuition, intensify it, above all give it fulfillment in action? For it has become pure vision only through the enfeeblement of its original being and, if one may so put it, through its own effort to interpret itself abstractly" (p. 226). *Intuition*, then, is that "something beyond all science" in which Bergson would invest that trust we found him to have withdrawn from the operation of *intelligence*; nothing but intuition can renew in us a lost confidence in the original promise of life. But how? It is as though that stream of life, which an abstract science would picture as coming out of the past, branching, and spreading itself in manifold forms through space, were, in the immediate experience of each

moment, to be felt welling up within us, its source in the depths of the me, its expression in the development of myself. To find renewal at this life-source within the self, the way of all mystics is one: "Noli foras ire; in te redi; in interiore homine habitat veritas," (V. Rel., 72) Augustine counseled in his day, and the modern way to life is no different from the ancient. Nor can the result be said to differ—if one would know of our author what he would conceive to be the intimate experience, and what the subsequent outlook of one who had thus made his way to the inner spring of being, the answer comes with something of the rush of what it essays to describe: "A soul able and fit to make this effort would not so much as ask whether the principle with which it now held itself in contact was the transcendental cause of all things, or only the terrestrial manifestation of this cause. It would suffice it to feel that it was letting itself be penetrated by, without finding its personality absorbed in, a being vastly more powerful than itself—so might the iron feel the fire that makes it glow. Its attachment to life would be, from that moment on, its inseparability from life's source, a joy in its joy, a love of what itself is all love. In very excess of joy, this soul would overflow toward society, but toward a society which would then be the whole of humanity, loved for the love of that from which all alike will have come. The confidence that static religion brought in its day would stand transfigured: no more care for the morrow; no more anxious self-questioning—no matter would longer be worth a worry, too lofty the moral significance all must have taken on. Now it would be the very detachment from each thing in particular that completed an attachment to life in general" (pp. 226, 227).

With this vision of life renewed, we may consider Bergson's thought to have reached its final conclusion; the question that gave it beginning has found its answer in a mystical ending. What, it was then asked, of the future of life? And now we know. The hope of life's future can lie nowhere else than in the hope of life's last expression, man, renewing an interrupted communion with life's first beginning, God. God, indeed, for the great creative urge, if as the source of life it is to be called *Life*, and as the source of love it is to be called *Love*, shall it not as the source of all things be called *God*? But, indeed, for the mystic the last two names are one; for, that "God is love, and is the object of love—all the meaning of mysticism lies in this" (p. 270).

In *Les deux sources*, a philosophy that found its first expression in *Les données immédiates* reaches its fitting conclusion: to those who caught the implications of M. Bergson's opening pages, nothing could come more in the way of a fulfillment than his closing, whose mysticism is explicit, whose clarity is complete. "Clarity," we say,

yet the very clarity of a mystic is his obscurity in the eyes of a science that would remain objective; the more definitely the mystic reveals his motives, the less intelligible to the scientist do these motives become. It has always been so; the private "experiences" of the one are not the public "experiments" of the other; the "intuitions" of the one are not the "verifications" of the other: it is impossible that the religion of either should bring cheer to the other's heart. At least, this is the history of things; the history to which reference was made in an earlier paragraph, with the hope that there might be room to return to the subject before the end. And, indeed, one who would consider the contribution of a mystic, *should* before the end reflect on the most persistent note in history, the apparently irreconcilable difference in type between the mind that turns to mysticism, and the mind that clings to science. What difference of temperament can it be, one wonders, that throughout so long a past shall have divided men into two groups: those who put their trust in none but immediate experiences; and those who distrust experience the more, the more it is immediate? Shall we say, the one is bound to feel its urge to live in the form of a *vis a tergo*; the other, to catch its motive for living in some clear beckoning vision? If so, the greatest need of the one must be to attain to emotional confidence in the authority of the force impelling it; the greatest need of the other, to arrive at logical conviction of the worth of the end inviting it. No wonder, if this be so, that history will always discover your mystic feeling his way back to origins, your scientist, thinking his way on to destinies. Certain it is that throughout the past the two have lived religiously apart; and no system of philosophy seems yet to have arisen, apt to draw them closer together than the beginnings of history found them. Yet how curiously alike are the phrases in which the two sum up their ultimate findings! Is it true, that for one grown wise on the Prophets all religion comes to this, that "God is love, and is the object of love"? Then is it no less true that for a religion grown old in Aristotle, "*la gloria di Colui che tutto muove per l'unverso*" is indistinguishably the glory of one that loves and of one that is beloved. Wherefore, one may think that to some future philosophy a search for the fountain of love and a study of what is worth loving will seem inseparable aspects of one religious problem. A mysticism grown more thoughtful of ends; a science more experienced in means, might come to know the Prophets and the Aristotles of this world as neither knew the other. What, for example, if mysticism were to come to see that no heart's desire could be so certain of its object, but that its hope of winning this object must depend on the measure of its science? And what, again, if science were to bring itself to admit that no end of ambition could be so

demonstrably worthy, but that the courage to pursue this end must be in need of incessant renewal? Certainly, a philosophy that combined these reflections would have its own practical implications; these could overlook neither the future, nor the past, nor the present of any humanity they pretended to guide. Not the future; for to the manner of thought here suggested, enthusiasms and all their works must remain suspect until reflection had considered whether indulgence in this one or that promised to advance or retard the progress of science; promised to reduce or to enhance "that discouraging margin of chance" now separating want from fulfillment. And not the past; for the science that forgets how human is the scientist himself and all the world on which he depends, must itself be unscientific; must have overlooked the value of an inheritance of progress-made, to the cause of a progress-to-be made; must have denied itself the replenishment to be sought (and on good scientific grounds to be sought) "in the direction whence life came." And not, finally, the present; for though the philosophy we imagine may not rest in that mystical peace which knows "no care for the morrow," yet it would seem to be in the only way of attaining to that dynamic repose, that sense of continuing progress, wherein the spirit is content to feel the momentum of all the past propelling it into the future.

In a word, one can imagine a philosophy, theoretically sound, practically energetic, that would accord to the immediate experiences of the mystic a much more important place than the rationalizing tendencies of the past have generally allowed them. In the mystic's moments of rapt "communion," it might recognize a source of replenishment different neither in kind nor in origin from the renewal a struggling humanity has always found in its arts: it would be proposing nothing unheard of if it likened the mystic to the musician, and caught in certain religious moods the note *eines musikalischen Bewusstseins* (Hegel). What it could not do, would be to surrender to the suggestions of "intuition" the intelligent direction of life; rather, the more it would draw its strength from the springs of the past, the less would it trust its future to any but the counsels of science.

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Réflexions sur la Pensée Comtienne. JEAN DELVOLVÉ. Paris: Félix Alcan. 1932. viii + 318 pp.

The vitality of Comtism, in an age when so many of its tenets are regarded either as commonplaces or absurdities, is not a little astonishing to a casual observer. Hardly a year goes by without some note

worthy contribution to the history or interpretation of the ideas of the central figure of French Positivism, whose intemperate appetite for immortality of influence has so singularly failed to prevent his achieving it. Professor Delvolvé of the University of Toulouse presents his careful studies as no more than a "series of reflections" concerning what he finds living in Comte's thought. But actually he produces no less than a broadly-argued reinterpretation of Comte's life and works, developed from hints dropped by Ravaisson and Boutroux. The substance of his thesis is that, hidden beneath the surface of the largely-false theories so inflexibly maintained by Comte and his disciples, lies a sound metaphysical core of what might be called "spontaneous dynamism" traceable to the essentially practical character of the system as a whole. The influence of this concealed finalism has been both unsuspected and considerable, affecting such apparently distant thinkers as Cournot, Boutroux, and Bergson. It is to Comte's daring aspirations and instructive failures, not to his apparent successes, that we must look if we are to discern his true significance, especially to his failure to break completely, as he intended, with the dominant traditions of philosophy.

Comte being "one of the small number of philosophers, the appreciation of whose works can not be detached without peril from the psychology of their author," Professor Delvolvé lays his foundation with care by devoting his first chapter to reviewing and revising the entire medico-psychological diagnosis of Comte's mental difficulties, first made by Professor Georges Dumas in his *Psychologie de deux Messies positivistes* (1905). Boldly he challenges all views which maintain the psychological discontinuity of the "two careers," defending their essential homogeneity as against not only Dumas, but Grasset, Lévy-Bruhl, Seillière, and all the host of historians in whose writings the philosopher of the first career, "*le grand propagateur du préjugé positif*," alone survives. Dumas' crucial error lay in his defective analysis of Comte's transition in 1845 from theory to practice, from the *Cours* to the *Système*, under the influence of his thwarted desire for Clotilde de Vaux. Dumas saw only the sudden destruction wrought (as it seemed) to Comte's speculative system by this banal affair, portraying it as a sort of morbid and senile mysticism supervening upon the homogeneous philosophical career of a slightly psychopathic individual, the two careers being fused (the first of them, confused) by Comte's imperious passion for unity. Recently the psychiatrist Dr. Grasset, in a dedicatory address at Montpellier, went even further by declaring Comte's permanent mental condition one of *demi-folie*, of which only the earlier products are to be regarded as sane and acceptable.

Professor Delvolvé, on the contrary, holds that Comte's con-

genital mental difficulty was merely "a fundamental anomaly consisting of a dissociation of his emotional and functional relations from a passional life in a purely intellectual dimension." Intellectually Comte was precocious; emotionally he was retarded. There was never more than a verbal *rapprochement* between his powerful intellect, fiercely concentrated upon the ambitious program of positivism, and his crude and untutored emotional activities. Two severe crises occurred, one in 1826 and one in 1845, both of which Comte himself mastered by "*un coup d'état rationnel*" wholly in keeping with his unevenly developed personality. The author is inclined to accept in substance Comte's claim that his discovery in 1845 that "his love for Clotilde and for humanity were one and the same thing" was the dramatic occasion which led to an apparent resolution of the conflict between his intellectual ideals and their practical realization. He had exhausted intellectuality, and found himself at an *impasse*, powerless to pass over from his culminating science of *sociologie* to its concrete ethical consequences. The added shock of Clotilde's rejection of his uncultivated emotionalism at first threatened a repetition of 1826, but Comte avoided that by centering both his amorous exaltation and his speculative zeal upon the same imaginary object. The outcome, his "second career," was not at all "*une déviation malade, mais essentiellement un progrès évolutif et un enrichissement du système*," which nevertheless bore more and more marks of Comte's permanent anomaly as it gained in practical concreteness and complexity.

This reconstruction of Comte's psychology is vital because it forms the basis for an unwonted eulogy (outside the ranks of the Positivist faithful) of the *Système de Politique positive*. The author is correct in his statement that most commentators on Comte have sought to exalt the *Cours* and forget the *Système*. He would redress the balance. He finds the latter "perhaps the most important ethical treatise produced by modern thought." Why? Because it was a consistent extension of the positive method into the field of social practice? Not at all. Rather because it rests upon, and represents a return to, Comte's intuition of an Aristotelian finalism in human history, which, in obstinate adherence to the narrow prejudices of the *Cours*, it verbally denies. The entire Comtian canon, in the author's eyes, is permeated with a species of latent providentialism: "*le positivisme comtien, c'est un vaste poème de la destinée humaine*." Despite his own violent disclaimers, Comte "belongs among the pleiad of philosophers of all times who have sought to accomplish the submission of the totality of human knowledge to the universal ends of the spirit." His enthusiasm over the Law of the Three Stages is actually one with "the rationalistic exaltation of Plato and

Aristotle, Malebranche and Spinoza, in their perceptions of the identity of universal Reason and divinity." But this metaphysical calling was constantly at war with Comte's positivist prejudices about knowledge. Mistakenly he sought to do the work of synthesis with no other speculative devices beside those furnished by the objective analyses of the sciences. His error was in "searching among the relative for the attributes of the absolute." The result was an unstable equilibrium camouflaged by ingenious artifices to appear as a unity, but in which neither the scientific nor the metaphysical interest was allowed full scope. Professor Delvolvé shows, as many have done before him, how any such interpretation cuts both ways: the objective positivist of the *Cours* was much too hasty and dogmatic to be scientific; while the high priest of the Religion of Humanity was haunted by an agnostic conscience.

The summit of Comte's philosophic vision, for which the author chiefly honors him, was reached in his perception, during the "second career," of the "profound accord between the sentimental and intellectual destinations of mankind and the universal order of phenomena, which favors the evolution of the human species toward a spiritual Unity." Not since the Greeks, thinks Professor Delvolvé, has the ethical problem been so completely set forth in its proper setting. Of course, Comte failed completely to provide the final synthesis of which he so clearly saw the need. But thanks to the spectacular visibility of his failure, Comte, in the judgment of the author, "has opened the way for a renewal of the supreme Technique, after a period of relative stagnation caused by the simultaneous effects of the constraint imposed upon Western thought by the Christian religion, and of the development, too rapid to be immediately followed by philosophical reflection, of experimental analysis." We are given little hint of the nature of this method, except that it will bring "not simply man to humanity, but humanity, temporal and limited, to the infinity of eternal being."

The book as a whole offers one more proof of the extraordinary fecundity of the central idea:—social reorganization through scientific knowledge, initiated by Saint-Simon and his predecessors, and elaborated by Comte. And it emphasizes the intellectual tragedy involved in the fact that the mind which worked out the positivistic system was so poorly balanced, to say the least. Professor Delvolvé is, of course, entitled to select, if he chooses, the Comte of the "second career" as his hero; but to do so is to undertake to make convincing the greatness of a magnificent failure. So many pathological aberrations have to be passed over in order to get at the core of value underneath, that few are likely to accept the handicap. No doubt a great many of Comte's critics have overdone their admiration for

his methodology and their detestation of his religion. No doubt Comte's aim was at least subconsciously practical and synthetic from the start, with plenty of resulting metaphysical implications. But while the author has written an extremely stimulating re-estimate of Comte's theory and practice from a point of view close to that of subjective idealism, he can hardly be said to have given cause to alter the main outlines of the prevailing portrait. The book contains an index of authors cited, but no bibliography.

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NOTES AND NEWS

The new officers for the coming year of the Pacific Division of the American Philosophical Association elected at the meeting at Mills College, December 29, are as follows: President, J. E. Boodin; Vice-President, Georgiana Melvin; Secretary-Treasurer, H. G. Townsend; new members of the Executive Committee, H. C. Brown, G. P. Adams, D. A. Piatt.

The officers for 1933 for the Eastern Division of the American Philosophical Association, elected December 30 at Bryn Mawr College, are as follows: President, C. I. Lewis; Vice-President, C. J. Ducasse; Secretary-Treasurer, H. A. Larrabee; new members of the Executive Committee, George Boas, C. F. Krusé.

The November, 1932, number (Band XXI, Heft 3) of *Logos. Internationale Zeitschrift für Philosophie der Kultur* is designated "Amerika-Heft" and the table of contents is as follows: Zu den Antinomien zurück: *George Rebec*. Dialektischer Realismus: *Charles M. Perry*. Mathematik und Sinnesempfindung. Materialien zu einer Whitehead-Kritik: *Edgar Wind*. Der "Neue Realismus" in den Vereinigten Staaten: *Gustav Müller*.

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THE JOURNAL OF PHILOSOPHY

DR. WHITEHEAD ON PERCEPTION

AS even the cursory student of Dr. Whitehead must gather, there are for him two modes of perception: the "mode of causal efficacy" and the "mode of presentational immediacy." In dealing with the problem as to what is really primitive in perception, it is with the former of these modes that I shall be chiefly concerned. But in order that we may approach Dr. Whitehead's account of perception without any distorting presuppositions, it is essential to indicate clearly at the beginning not only what he understands by these two modes of perception, but also the rather limited sense in which he uses the term "consciousness." By this elimination of initial prejudice, I hope to prepare the way for a radical investigation, in the second section, of his "theory of feelings" (which is involved in any discussion of Dr. Whitehead): and then, in the last section, to face squarely the problem as to what is primitive in perception.

I

THE TWO MODES OF PERCEPTION

A good text to start from is the following:

Consciousness flickers; and even at its brightest, there is a small focal region of clear illumination, and a large penumbral region of experience which tells of intense experience in dim apprehension. The simplicity of clear consciousness is no measure of the complexity of complete experience. Also this character of our experience suggests that consciousness is the crown of experience, only occasionally attained, not its necessary base.¹

It will now be apparent that the order of criticism I am employing is the reverse of what, according to Dr. Whitehead, is the actual order of experience. I am beginning with "consciousness," "the crown of experience," and working back to its more primitive experiential setting.

A few words, first, as to his special use of, "consciousness." "Whenever there is consciousness," he says, "there is some element of recollection." Such an element or elements of recollection are what have been called "mnemic events." They constitute the interpretative components of experience, and are typical of high-grade organisms. But Dr. Whitehead has noticed a subtle consequence

¹ *Process and Reality*, p. 378.

of these recollective elements in experience that is important for his definition of consciousness. It is best illustrated by a brief quotation:

The general case of conscious perception is the negative perception, namely, "perceiving this stone as not grey." . . . Consciousness is the feeling of negation: in the perception of "the stone as grey," such feeling is in barest germ; in the perception of "the stone as not grey," such feeling is in full development. Thus the negative perception is the triumph of consciousness.²

We now see that by consciousness Dr. Whitehead means what is generally meant by "thought." Consciousness for him is not an unobserved but implied function, or an epiphenomenon, causally inoperative and mysterious in origin. It is simply a name for certain sophisticated feelings, i.e., feelings of comparison and discrimination, enjoyed by superior organisms. Such feelings belong to the highest "supplemental phase" of experience and grow out of "the mode of presentational immediacy"—which we must now examine.

Dr. Whitehead says:

Perception which merely, by means of a sensum, *rescues from vagueness* a contemporary spatial region, in respect to its spatial shape and its spatial perspective from the percipient, will be called perception in the mode of presentational immediacy.³

The above definition is not to be restricted solely to visual data. It is intended to emphasise that whatever "eternal object" (i.e., specific quality or universal) blossoms cleanly and obviously in experience is to be assigned to "presentational immediacy." Thus all exact measurement and determination of relative positions in space, all esthetic enjoyment of nuances of color or sound, are observations made in this mode of perception. But the definition is also meant to point out that all such observations, realised alone in the pure mode of presentational immediacy, are by this very fact *spatialised*.⁴ This is the point that Dr. Whitehead is driving home, and it must not be overlooked. For what he calls "the principle of contemporary independence" finds its justification here. The upshot of this principle

² *Loc. cit.*, pp. 225-226.

³ *Loc. cit.*, p. 170. Italics mine.

⁴ Cf. *loc. cit.*, p. 159. "The more primitive types of experience are concerned with sense-reception, and not with sense-perception. . . . the course of thought can be indicated by adopting Bergson's admirable phraseology, sense-reception (the mode of causal efficacy) is 'unspatialised,' and sense-perception (the mode of presentational immediacy) is 'spatialised.'"

I do not think that Dr. Whitehead wishes to imply that the experiential elements of "presentational immediacy" are *out of time because spatialised*. The "eternal objects" of those experiential elements are immane to the conerescent process; but the actual elements themselves lie in a "presented locus," rather than in a "unison of becoming" as do the elements involved in "the mode of causal efficacy."

is that no examination, however minute, confined exclusively to "the mode of presentational immediacy," can reveal any actual causation in the world. Analysis conducted in this mode of perception is purely "extensive," and as such is incapable of explaining the origin of our ideas of genesis, of process, of causation.

Hume's polemic respecting causation is, in fact, one prolonged, convincing argument that pure presentational immediacy does not disclose any causal influence, either whereby one actual entity is constitutive of the percipient actual entity, or whereby one perceived actual entity is constitutive of another perceived actual entity. The conclusion is that, in so far as concerns their disclosure by presentational immediacy, actual entities in the contemporary universe are causally independent of each other.⁵

One of the main themes—perhaps the dominant theme—of these difficult (because profound, rather than obscure, as the ignorant suspect) Gifford lectures is the sustained protest against the exclusive consideration which the philosophic tradition has devoted to the "small focal region of clear illumination," and the willful neglect of the more primitive bulk of experience. Philosophers have been interested only in the distinct tractable elements of perception, and have ignored the more inarticulate background of feeling in which those distinct elements are imbedded.

Let us now turn to "the mode of causal efficacy." Before offering any criticism of Dr. Whitehead's analysis of what is primitive in experience, I will try to explain briefly just what he means by this other mode of perception.

The empirical information derived from "the mode of causal efficacy" is crude, inarticulate, and "heavy with emotion." Nevertheless, we must not disdain the primitive source of much of our knowledge. The feeling of an antecedent world imposing itself upon our own experience is given in this mode. And—what is perhaps ancillary to, but distinct from, the above point—our constant awareness of the body "as the great central ground of reference" is due to the various strains that signify our sense-reception of an imposing world. Dr. Whitehead is most insistent on this last factor. The feeling of "the witness of the body" in every perception is an elusive but given factor that he feels has been stupidly neglected by philosophers. Such a feeling is not as tractable, perhaps, as a red color or a triangle: it does not fit so easily into any of the conventional pigeon-holes of epistemology. But it is prior—according to Dr. Whitehead—to any clear intuition of qualities, and "expresses the ultimate truth of animal perception."

The origin of the idea of causation is also to be ascribed to this mode of perception. Dr. Whitehead says quite plainly that, "the

⁵ *Loc. cit.*, p. 173.

notion of causation arose because mankind lives amid experiences in the mode of causal efficacy." And this is what Hume is supposed to have missed. Hume's analysis, if confined to "presentational immediacy," is masterly and quite correct: but he overlooked the primitive emotional setting in which the very concept he analysed away is *experientially realised*. The complex feeling of compulsion and satisfaction given, for instance, on quickly closing a door when some noise disturbs one's work, is not to be analysed into sorry fragments of experience in "the mode of presentational immediacy": it is, quite simply, to be "lived" on a lower less sophisticated plane of experience. No frenzy of dissection can ever reveal a real cause at work: we must relapse into vulgar experience to recover the primitive authenticity of our categories. I think the idealistic climate—or at least the empirical air—of such a philosophy is distinct here.

It amounts to an identification of psychological experience with *actual genesis*. But Dr. Whitehead does not hesitate on the borders of a subjectivistic panorama: he is quite confident—as most Englishmen in philosophy are—that "a final reality is to be identified with acts of experience."

While it is salutary for an account of "complete experience" to describe as far as possible the modes or movements of perception, as Dr. Whitehead has done, it is also obvious that there must be an intimate coöperation between them. This "interplay," as he puts it, between his two pure modes of perception is called "symbolic reference." But a "common ground" is necessary if such reference is to be valid and germane to the two modes. By a "common ground" is meant that we must recognise "components in experience" that "are identical in each of the pure perceptive modes." Now common sense, physical theory, and the lessons of physiology, Dr. Whitehead says, all point to the fact that "presentational immediacy" is an outgrowth of the earlier, more primitive mode of "causal efficacy." The clean geometrical shapes that are disclosed in "presentational immediacy" depend on antecedent "geometrical strains in the body," and the various well-defined sense-data are dependent upon earlier "physiological excitements of the requisite cells in the body."

Presentational immediacy is the enhancement of the importance of *relationships which were already in the datum*, vaguely and with slight relevance. This fact, that "presentational immediacy" *deals with the same datum* as does "causal efficacy," gives the ultimate reason why there is a common "ground" for "symbolic reference."⁶

It is absolutely necessary to note that here again Dr. Whitehead is using a word, viz., "datum," in a somewhat unfamiliar sense. He does not mean by "datum," for instance, an immediate experience

⁶ *Loc. cit.*, p. 243. Italics mine.

of an unequivocal quality: he means by it either one of the two following things.

In the above quotation the "datum" is a complex of pertinent features of a relative universe that have been "appropriated" by a perceiving being ("prehending subject") for its own "internal constitution." So it (the "datum") is not here exactly what we call a thing-in-itself, but signifies rather the *incipient sensory effects*. What Dr. Whitehead calls the "initial data" is nearer to what is generally called the "external stimulus" or "thing." This is the other sense in which he sometimes speaks of the "datum." But, I repeat in the above quotation, the "datum" is the relative universe as *absorbed into the peculiar "perspective"* of a responding organism ("prehending subject"). It is the "objective datum" that has been derived by appropriation and elimination (viz., "negative prehensions") of the "initial data." We must remember that for Dr. Whitehead the "prehending subject" (responding organism) is "built up" out of the actual elements that it has taken, gathered, or absorbed from its relative universe. And these actual elements still retain in the "prehending subject" their earlier "systematic relationships" in the external world. The truth of perception, and therefore the possibility of knowledge, is claimed by Dr. Whitehead to hinge on this last point: *that the immediate field of experience should display a system of terms and relations that actually pervades the world.*

If experience be not based upon an objective content, there can be no escape from a solipsist subjectivism.⁷

So we see that a "common ground" for the two modes of perception is established by the fact that they both operate with the same "datum"—in the sense in which "datum" has been explained above. The inarticulate vague relations embedded in the "presented duration" of causal efficacy, are clarified and lifted into conspicuousness by the "supplemental mode" of presentational immediacy. The "common ground" of "symbolic reference" is thus secured by two factors: (1) the "presented duration" or "concurrent unison" of causal efficacy that is to be illuminated by the "enhancement of precision" characteristic of presentational immediacy; (2) the identity of certain "eternal objects" (universals) that are "components" in both modes of experience. But the important point to remember in reading Dr. Whitehead is that presentational immediacy merely *lifts into obviousness terms and relations* that were already in the rough-cast of causal efficacy.

⁷ *Loc. cit.*, p. 212.

II

THE UNUTTERABLE IN PERCEPTION

Let us concede to Dr. Whitehead his rather special use of "consciousness"; and tentatively reserve this term to designate certain sophisticated feelings of comparison and discrimination involved in the more articulate mode of "presentational immediacy." The question I then wish to ask is this: Is or is not the attempt to employ these same "conscious" feelings in an effort to unravel a more primitive mode of perception of *necessity futile*? For Dr. Whitehead to assert that what is clearest in perception, and first in logic, is not basic and first in experience, is most interesting. But when he proceeds to unravel neatly the primitive setting of conscious analysis—to classify coolly the unutterable in perception—our suspicions are slightly aroused.

Now while Dr. Whitehead admits that "consciousness primarily illuminates the higher phase in which it arises, and only illuminates earlier phases derivatively, as they remain components in the higher phase,"⁸ he does not, to my mind, quite realise the transcendental objections to such a statement. What guarantee have we that some "components" of *present* conscious experience are identical with some "components" of an earlier, less articulate phase of experience? It is all very well to say that we first had crude experience of these components in "the mode of causal efficacy," but where is the transcendental guarantee that my present immediate experience contains those same "components"—that both modes of perception really operate with the same "datum"? What is *now* given in experience is unimpeachable: what *was* given is always questionable in theory of knowledge. Which is another way of saying with Mr. Santayana that "all knowledge is faith."⁹ So the first flaw in Dr. Whitehead's

⁸ *Loc cit.*, p. 227.

⁹ Dr. Whitehead has reminded us that experience must be based upon an "objective content" if we are to escape the logical prison of solipsism. By an "objective content" he means that my immediate field of experience must contain components that have been lifted unimpaired out of the external world. I should say that certain "essences" or "eternal objects" displayed in perception are very likely identical with universals embodied in the structure of the world: when I intuit the essence of perceiving the four legs of a chair, such an essence is probably identical with a quality embodied in the formal constitution of the *chair-in-itself*. But *identity of essence is not knowledge by acquaintance with fact*. Dr. Whitehead has not only slurred all intellectual distinction between the organic and inorganic, the conscious and unconscious, but has confused at a vital point in his argument the ultimate distinction he so clearly makes between "eternal objects" and "actual entities." This last and gravest confusion is a desperate effort to avoid the epistemological consequences of Mr. Santayana's "solipsism of the present moment," and to base perception upon an "objective content." But the effort is a fiasco. The ideal must not be mixed with the flux of existence. Render unto Caesar the things that are Caesar's, but unto Santayana the things that are Santayana's.

bifurcation of perception into two modes is detected from the standpoint of *transcendental criticism*, and in the interest of logical scrupulousness.

Let us examine further just how Dr. Whitehead has attempted to unravel the primitive setting of conscious analysis. And it will be best to go straight to his "theory of feelings," for if he has erred in *overanalysing the unutterable in perception* (and this is precisely my contention), the error is surely here.

What is a feeling, then, not to mention a "theory of feelings"?

A feeling is the appropriation of some elements in the universe to be components in the real internal constitution of its subject. The elements are the initial data; they are what the feeling feels. But they are felt under an abstraction. The process of the feeling involves negative prehensions which effect elimination. Thus the initial data are felt under a "perspective" which is the objective datum of the feeling.¹⁰

Here is the attempt to make a "genetic" division (as distinguished from a "coördinate" division) of the concrescent operation that is the inner concern—we are told—of every centre of experience in the universe: and for Dr. Whitehead the world is composed of nothing but such centres or "subjects" of experience. Now the inner concern of a concrescent operation

... is not primarily intellectual; it is the lure for feeling. This lure for feeling is the germ of mind. Here I am using the term "mind" to mean the complex of mental operations involved in the constitution of an actual entity. Mental operations do not necessarily involve consciousness.¹¹

It is only the more distinguished, then, of these subjects of experience that are gifted with "conscious feelings": which simply means that in them discrimination and clarity have become uppermost. I think the analogy to Leibniz is conspicuous here—as well as elsewhere.¹² But this concrescent operation is more *exactly* divided by Dr. Whitehead (for he is quite clear about what I call the unutterable in perception) into just five factors.

The factors are: (I) the "subject" which feels, (II) the "initial data" which are to be felt, (III) the "elimination" in virtue of negative prehensions, (IV) the "objective datum" which is felt, (V) the "subjective form" which is *how* that subject feels that objective datum.¹³

I don't see how Dr. Whitehead has come to affirm that these five factors are involved in the origination of every actual entity, *whether or not that concrescent operation issues in "conscious feelings."* He admits, as we have just seen, that—

¹⁰ *Loc. cit.*, p. 327.

¹¹ *Loc. cit.*, p. 118.

¹² Cf. *Monadology*, §19. "I prefer . . . to keep the name *soul* for simple substances whose perception is more distinct. . . ."

¹³ *Process and Reality*, p. 312.

Consciousness primarily illuminates the higher phase in which it arises, and only illuminates earlier phases derivatively, as they remain components in the higher phase.¹⁴

He has separated these five factors in experience, then, by following up the immediate, given clues to an earlier more primitive mode of perception—clues that are revealed in clear perception, but are indicative of a dim emotional background. That such clues can only be followed up by beginning from consciousness is granted.

"This is inevitable because we can only discuss experiences which have entered into conscious analysis."¹⁵ To my mind this is a most astonishing statement for Dr. Whitehead to make, in view of his philosophy, although I regard the statement as absolutely true! For we must remember that "conscious feelings" are not necessarily involved in any of the five factors of experience classified above, but these same factors are nevertheless supposed to operate in all experience.

So my main objection to Dr. Whitehead's "theory of feelings" is simply that I can find no such distinct clues to a more primitive mode of perception in my own *total* field of experience. I believe there is a large element of sheer feeling (call it what you will) that suffuses all perceptive experience, and this has been overlooked, perhaps, in the customary accounts of perception.

It is to Dr. Whitehead's credit that he has called our attention to this neglected element in experience; but I am certain he has got too much out of it. And I come now to a point that I have very much at heart: the recognition of *the unutterable in perception*. At the risk of appearing banal, I will indulge in an illustration drawn from personal experience, in order better to make my point.

The other morning I was preparing to shave in my room. I had already lathered my face, when there came a knock at the door and my friend S. entered. We fell into conversation. I commenced shaving, but my attention was dominated by something he was saying. Soon there came a lull in our talk, and I was slightly surprised to find the right side of my face, neck, and chin cleanly shaved. This had happened while, as I say, my *psychological field of attention* was dominated by the words of my friend. I will allow that perhaps my attention flickered once or twice over to the business of shaving. But even so, I am sure that only a dim inexpressible feeling was given—an example of what I mean by the unutterable in perception. With such a total absence of conscious discrimination—and very likely of any feeling at all—what right have I to assume that the five factors in experience noted by Dr. Whitehead were nevertheless

¹⁴ *Loc. cit.*, p. 227. Italics mine.

¹⁵ *P. & E.*, p. 253.

operating on some crepuscular plane of perception, while I was consciously attending to the words of my friend? This must be what Dr. Whitehead believes, because apart from those five factors operating in all kinds and grades and levels and complexities of experience "... there is nothing, nothing, nothing, bare nothingness."¹⁶

As a matter of fact, it is only in the full light of attention that I can make anything out of Dr. Whitehead's five factors in experience. The first factor, (1) "the 'subject' which feels," is, I suppose, the immediate total field of perception; by the second factor, (2) "the 'initial data' which are to be felt," I understand those transcendent sources of our experience;¹⁷ (3) "the 'elimination' in virtue of negative prehensions" is the positive refusal by the immediate field of attention to accept all that the "initial data" have to offer; but the last two factors—(4) "the 'objective datum' which is felt," and (5) "the 'subjective form' which is how that subject feels that objective datum"—I find most difficult to separate *even* in conscious analysis. "The objective datum" is, I believe, the external contribution to experience that has been accepted by "the 'subject' which feels"—and "the subjective form" is the consequence of something that the "subject" does to "the objective datum"!

Leibniz has told us that "when there is a great multitude of small perceptions but nothing distinguished there is the condition of being stunned."¹⁸

Let us be reconciled to the fact that a great deal of our experience is in this same stunned condition and therefore baffles all analysis. Such a condition in experience should be accepted as an empirical fact and then "left alone." Dr. Whitehead has tried to do a very difficult thing: he has attempted to catch and explain the unutterable in perception. For what is unutterable is not unreal; on the contrary, it is perhaps what is empirically most real. But I can not believe that his attempt to utter the unutterable has been successful—at least as regards his special "theory of feelings."

It has occurred to me that a recognition of the wide extent and unanalysable character of the unutterable in experience may also disallow much of Dr. Whitehead's treatment of the problem of causation. Whether or not he has succeeded in showing that Hume and "the entire philosophic tradition" have neglected a primitive level of experience from which our notions of time and causation are ulti-

¹⁶ *Loc. cit.*, p. 234.

¹⁷ I should not affirm with Leibniz and Dr. Whitehead that these *posited* sources of our experience are nothing but other "monads" or "subjects of experience"—nor should I care to deny it. The fate of realism does not depend on a literal description of the transcendent world.

¹⁸ *Monadology*, § 21.

mately derived, I am not quite prepared to say. As Mr. Morris has recently written:

No doubt Hume and his predecessors do not lay stress on the time-aspect; but their whole view rests essentially on the representation of complex and sophisticated states of mind, like knowing and believing, as having been developed necessarily and inevitably out of simple experiences, which are taken to be primitive.¹⁹

But even if there are such neglected "causal" data as Dr. Whitehead claims to discover in his own experience, I should hesitate to ascribe such dubious experiences to the ultimate operations of existence for two reasons. (I) I believe there is (for the epistemological critic) a symbolic veil hanging not only between the mind and its posited transcendent object, but also between the mind and the ultimate elements of existence. One of the consequences of this symbolic veil is to simplify for human perception the bewildering complexity of Nature.²⁰ I am therefore reluctant to assign to the ultimate operations of existence any simplified data born on the plane of human perception. (II) As Lord Russell has reminded us, contemporary physics has become "visual" as contrasted with the "muscular" physics of the last century. The current notion of causation has been entirely purged of all ideas of power, effort, or muscular strain. So if Dr. Whitehead claims that "the notion of causation arose because mankind lives amid experiences in 'the mode of causal efficacy,'" perhaps the answer might be that our former notion of causation has been supplanted, so that the empirical origin of the old notion is no longer of vital interest.

III

ON WHAT IS PRIMITIVE IN PERCEPTION

In comparing the philosophy of Mr. Santayana to his own, Dr. Whitehead has said:

If we allow the term "animal faith" to describe a kind of perception which has been neglected by the philosophic tradition, then practically the whole of Santayana's discussion is in accord with the organic philosophy.²¹

As I have been influenced by Mr. Santayana, I find this comparison most interesting.²² But I should like to elucidate it somewhat,

¹⁹ C. R. Morris, *Locke, Berkeley, Hume*, p. 160 (Oxford University Press, 1931).

²⁰ A clear account of the "simplification" which perception involves is given by Mr. C. A. Strong in his *Essays on the Natural Origin of the Mind*, chap. II.

²¹ *Process and Reality*, p. 198.

²² I have written elsewhere of other similarities in the philosophic systems of Mr. Santayana and Dr. Whitehead. See *Philosophy*, Vol. II, No. 7.

and in so doing I hope to show just how much in Dr. Whitehead's theory of perception I can accept as sound. In a recent book Mr. Santayana has spoken of the "two phases or movements" in transcendental criticism.²³ One of these movements is the sceptical retreat to the immediate field of experience, and a critical examination of all claims to knowledge. Such an examination, according to Mr. Santayana, can only issue in a "solipsism of the present moment." If traditional British empiricism had been radical and uncompromising, it might have foreseen this *logical* conclusion.²⁴

The other movement has to do with the positing in *naïve perception* of a world beyond the momentary ego—a past, contemporary, and future world. This world, or Realm of Matter, is the total object of "animal faith." As soon as the sophisticated percipient (for the sceptical epistemologist is that) ceases to question the datum of the passing moment, he becomes again a naïve percipient, and by an involuntary necessity, a transcendental compulsion, *contraposes* to himself a real object—the non-ego.²⁵ This compulsion of the mind to posit an object is not itself a feature of experience, being transcendental; but there are certain "given" elements in naïve perception that can be isolated and regarded as symptoms of such an exterior constraint.²⁶ These elements are: (I) the sense of distance and direction; (II) a feeling of bare assent or crude belief; (III) a feeling (present at least in some cases) that we perceive "with" the sense-organ—as Dr. Whitehead puts it, a feeling of the "withness." Of these three elements in naïve perception, I am most certain of the first. The second, a feeling of bare assent, is a quality that is almost unutterable, but empirically indubitable. It is not indeed the full-fledged, distinct feeling of belief that comes after doubt or hesitation. But I hold that belief is a generic term, and I use it to cover many kinds of feeling; e.g., memory and expectation are forms of belief. The third element, a feeling of the "withness" of an organ of reception, is certainly not given in all cases of naïve perception. If this element is to be included in an account of naïve perception, it is much more likely to occur in touch than in sight. But I am inclined to be-

²³ *The Realm of Matter*, p. 8.

²⁴ I am inclined to hold that solipsism, however *logically* faultless, is the result of a rather artificial method of criticism, and I do not relish any "movement" of thought that leads to such an *impasse*. But it is Mr. Santayana's other movement in transcendental criticism that Dr. Whitehead refers to in the above quotation, and which concerns us in this paper.

²⁵ Mr. Santayana is not responsible for the terms "transcendental compulsion," "naïve" and "sophisticated percipients," which are my own.

²⁶ The "transcendental compulsion" I speak of is doubtless some reaction of the body under the fire of its environment. The three empirical elements mentioned above are the inevitable "given" features that betray such an exterior or transcendental constraint.

lieve that the sense of direction and distance is a feature of experience due to the adjustments of our sense-organs in perception, and that the latter in themselves are not empirical objects unless there is some functional distraction to switch the attention to the affected organ.

Let us, however, reunite these several elements in naïve perception (as they are united in actual experience) and speak henceforth of a *complex feeling of positing an object*. This feeling of positing is *not prior* to the experience of a visual or auditory datum, but rather suffuses the requisite sense-data, and refers the total burden of perception to a transcendent object.

The foregoing brief account of naïve perception differs from that of Dr. Whitehead in at least one important respect: his primitive "mode of causal efficacy" is *prior in time* to his more sophisticated "mode of presentational immediacy." In facing this important question as to what really is primitive in perception, let us examine the case of sight, and another quotation from Dr. Whitehead will be helpful.

The Greeks looked at a stone and perceived that it was grey. . . . The Greeks started from perception in its most elaborate and sophisticated form, namely, visual perception. In visual perception, crude perception is most completely made over by the originative phases in experience, phases which are especially prominent in human experience.²⁷

Dr. Whitehead speaks as if there were something rather anomalous about "seeing": he almost suggests that as a general rule people (though not the Greeks) are blind. But why is vision so sophisticated? If a painter is interested in a certain color of the landscape, and temporarily lifts or extracts that quality from its perceptual space-time setting in order to match the specific nuance on his palette, his perception might be called "sophisticated." The sense of distance and direction, together with any feeling of belief or positing, have been momentarily suppressed, and the pure datum is loosened from some private frame of space and time.²⁸ But this sort of perception is almost as rare as the sophisticated datum of the epistemological critic: normally, we simultaneously look at and posit an object transcendent to the descriptive terms of our experience. I say *simultaneously*, and this is the nerve of my difference with Dr. Whitehead.

He writes: "The ultimate momentary 'ego' has as its datum the 'eye as experiencing such and such sights.'"²⁹ This quotation is a

²⁷ *Process and Reality*, pp. 164-165.

²⁸ I am inclined to define "sophisticated perception" by the *absence* in immediate experience of the feeling of positing. I hope to work out such a view in the near future.

²⁹ *Process and Reality*, p. 165.

little obscure out of its context. Dr. Whitehead is trying to turn the tables on Hume, and answer the challenge which Hume issues in a well-known passage.

But my senses convey to me only the impressions of coloured points, disposed in a certain manner. If the eye is sensible of anything further, I desire it may be pointed to me.³⁰

Dr. Whitehead replies that the eye is sensible of something further, or rather *earlier*: the eye is itself sensible of seeing before anything is fully seen.

Thus "the eye as experiencing such and such sights" is 'passed on as a datum, from the cells of the retina, through the train of actual entities forming the relevant nerves, up to the brain.³¹

This last statement is to my mind definitely unacceptable. There are two errors in Dr. Whitehead's argument: one in personal observation, and the other in his physiology. Let me deal first with his error in personal observation. I absolutely fail to discover that "the ultimate momentary ego" (in this case, the eye itself) has any such primitive experience of seeing before anything is fully seen as Dr. Whitehead claims. There is, as I have already said, an inevitable feeling of positing that accompanies and suffuses the visual datum; but I find no feeling, in normal perception, that can be interpreted as reporting a seeing "with the eyes" that occurred before the visual datum. The actual complex of seeing and feeling and believing is a synthetic unity of *contemporary* experience.

I should be disinclined to confute Dr. Whitehead by appealing to indirect physiological evidence, if he did not himself believe that somehow physiology supports his view that "the mode of causal efficacy" is a primary level of perception which has been neglected by philosophers. There are many passages in his book that reveal this curious appeal to physiology, but the last quotation I gave will again suffice. It is apparent from this passage that Dr. Whitehead believes there is some elementary kind of awareness in the retina itself, and in the optic and other afferent nerves, *before* the cerebral cortex is stimulated. How ever did he arrive at such a strange notion? Similarly as regards the other senses, tactile or auditory, gustatory or olfactory: he always speaks as if there were some dim "causal experience" in the afferent nerve-fibres *before* the higher centres in the brain (not to mention the efferent nerves!) have been aroused. This notion of a sort of dim awareness all over the body is naïve and picturesque, but there is nothing in physiology to justify it.

But apart from all physiology, the error in personal observation is sufficient to jeopardise Dr. Whitehead's account of perception. De-

³⁰ *Treatise*, Part II, § III.

³¹ *Process and Reality*, p. 165.

spite his careful scrutiny of perceptual experience, I can not agree that "the predominant basis of perception is perception of the various bodily organs, as passing on their experience by channels of transmission and of enhancement." The mainspring of perception is a referring beyond the body to some antecedent source of stimulation. It is this *outward reference* in perception that Dr. Whitehead has neglected. On the physiological side this outward reference is doubtless some cerebral and motor reaction: on the subjective side it is a certain complex feeling of positing an object.

Modern empiricism has not convinced me that an object or thing should be dissolved into a hypothetical collection of sense-data. To confuse a thing with its effects is to suggest that a thing exists only in other things. This seems to me the unhappy but logical position of both Lord Russell and Dr. Whitehead. I believe, on the contrary, that it is epistemologically necessary to reserve the word "thing" for a transcendent object of perception. The object of perception is not some transient effect, some evanescent sense-datum, *here* in my immediate experience: it is *yonder*, a stubborn source of stimulation. To dissolve such a stubborn butt and source of experience into a hypothetical collection of sense-data, is to falsify and dislocate the antecedent object of "animal faith." But what proof or cogent reasons have I for asserting the existence of an object transcendent to the descriptive immediate terms of experience?

There is no *logical* proof of the existence of a transcendent object of perception (I use the word "transcendent" to indicate that such an object is beyond but implied in experience). There are two considerations, however, that support my trust in a transcendent object: one empirical and the other more abstract. The empirical one is the complex feeling of positing I have already mentioned. The naïve percipient is transcendently constrained by the interplay between his body and its relative environment to posit real objects in space and time. He spontaneously identifies his sense-data with external things. This psychological (but not epistemological) identification of sense-data with external things is a biological expedient—a practical illusion necessary to naïve perception. An animal must behave as if his sense-data were real objects in order to survive.³² But the point I wish to emphasise is that, despite the uncritical complexion of naïve perception, the *sense* of an "otherness," of positing something beyond "the ultimate momentary ego," is a primitive empirical fact. What is primitive in perception is not so much "a mode of causal efficacy" in contrast to a more sophisticated kind of percep-

³² I am indebted again to Mr. C. A. Strong for calling my attention to the *biological* necessity for an animal to identify his sense-data with things.

tion, as some complex sense-datum *taken as if it were a real thing*.³³ The feeling of positing an object is a crude empirical symptom of a transcendent world.

The second consideration that enforces the primitive belief in real things is more abstract but equally convincing. I will state it as concisely as possible. If there were not transcendent objects or real things to provoke and control the immediate field of experience there would be nothing to account for the *actual* order of our experience. The obstinate limitation imposed on the infinite possibilities of experience is a subtle symptom of a prior operating world.

A transcendent object, then, must fulfill two indispensable conditions: it must be *prior* to perception if it is to provoke it: it must be a relative *source of control* if it is to support and account for the actual order of immediate experience. In naïve perception I am transcendently constrained to posit a stubborn object *now* and *there*.

I believe the two "symptoms" of a transcendent world I have mentioned are sufficient to sustain the primitive faith in realism. The only alternative I know of is solipsism. I suppose a deliberate sceptic can say that even an irresistible feeling of positing the non-ego is ultimately a certain emotional essence. It is difficult to see, however, how he could maintain this position at the moment of enjoying such a feeling. Only in memory could he doubt it; and memory on his own principles is always questionable. But granting that solipsism is *logically* unimpeachable, we must remember that the ultimate object of deliberate scepticism—some essence or universal—is not the object of "animal faith." And by "animal faith" I mean *naïve perception*.

To sum up. I accept solipsism as inevitable in deliberate scepticism. But the spontaneous intelligence is so constrained that it must continue to behave (except for a few sophisticated moments) as if there were a prior, natural world—a Realm of Matter.

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THE DEVELOPMENT OF JAMES'S PRAGMATISM PRIOR TO 1879

IN 1898 William James delivered his address, "Philosophical Conceptions and Practical Results," before the Philosophical Union of the University of California. This address, states Professor Perry, "marks the beginning of the pragmatic movement."¹

³³ I am told that in a new-born baby there is no phenomenal distinction between an "inner" and "outer world." But at the moment I am interested in the primitive texture of naïve *adult* perception; and not in an imaginative description of the inner life of the baby.

¹ *Annotated Bibliography of the Writings of Wm. James*, p. 37. The address is reprinted in *Collective Essays and Reviews*, pp. 406-437.

Eight years later in his second lecture on Pragmatism, James traced the origin of the pragmatic principle to Charles S. Peirce, who first introduced it into philosophy in his article of 1878, "How to Make Our Ideas Clear." This principle of Peirce, declared James, "lay entirely unnoticed by anyone for twenty years, until I, in an address before Professor Howison's Philosophical Union at the University of California, brought it forward again and made a special application of it to religion."²

Apparently James overlooked the historical facts of the case which contradict this statement, for he himself in 1881, or seventeen years earlier than the California address, had specifically cited, and utilized the conclusions of, Peirce's article to support his own argument in "Reflex Action and Theism."³ In that address, he remarked, "Indeed, it may be said that if two apparently different definitions of the reality before us should have identical consequences, those two definitions would really be identical definitions, made delusively to appear different merely by the different verbiage in which they are expressed."⁴ And in the footnote attached to this statement he wrote, "See the admirably original 'Illustrations of the Logic of Science,' by C. S. Peirce, especially the second paper, 'How to Make Our Thoughts Clear,' in the *Popular Science Monthly* for January, 1878."⁵

Here, too, as in 1898, James made a special application of the pragmatic principle to religion. When this address was reprinted in the volume of collected essays, *The Will to Believe*, the footnote reference to Peirce was retained with its original error of "Thoughts" instead of "Ideas" in the title of Peirce's article.⁶

Again in 1884, or fourteen years prior to the California pronouncement, James had cited Peirce's essay in his address, "On the Function of Cognition,"⁷ to buttress his own contention that real theoretical agreements and differences must be reducible to concrete perceptual agreements and differences. A footnote contains an extended quotation from Peirce's article in which the sentence occurs, "There is no distinction of meaning so fine as to consist in anything but a possible difference of practice."⁸

What is far more important, however, than James's references to Peirce in 1881 and 1884, is the fact that, as early as 1877, or twenty-one years before the pragmatic movement was given its for-

² *Pragmatism*, p. 47.

³ *Unitarian Review*, Vol. 16, pp. 389-416.

⁴ *Ibid.*, p. 400.

⁵ *Ibid.*, Vol. 16, p. 400.

⁶ *Op. cit.*, p. 124.

⁷ *Mind*, Vol. X, pp. 27-44.

⁸ *Ibid.*, p. 43.

mal impetus, James had attained a conception of pragmatism as a method which is identical in all respects with his final formulation of it in 1906. This formulation as presented in the second lecture on Pragmatism reads, "The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. . . . The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to anyone if this notion rather than that notion were true? If no practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle."⁹

If we compare this definition of pragmatism as a method with the following argument, taken from James's essay written in French, "Some Considerations Regarding the Subjective Method,"¹⁰ the conviction becomes irresistible that the "subjective method" of 1878 became the pragmatic method of 1898. James raised the question in this early essay, "Is the inmost nature of the world moral, or is the world only a pure fact, a simple brute existence?"¹¹ The positivists, he stated, will object that such a question is insoluble, or even irrational inasmuch as the inmost nature of the world, if it exists at all, is not a phenomenon and is therefore not verifiable. "I reply," he wrote, "that a question has a meaning and is stated plainly when from the question a clear practical alternative follows, in such a way that, accordingly as one replies in one way or in another, one must adopt one course of conduct or another."¹² When the question proposed is subjected to this test, James went on to show, it does involve two real practical alternatives according to whether one adopts the materialist's or the moralist's belief regarding the inmost nature of the world: "On the one hand, resistance to evil, the acceptance of poverty, martyrdom if necessary, in a word, the tragic life; on the other hand, concessions, compromise, relapses of conscience and the Epicurean life; such is the difference between the two beliefs."¹³ "One sees that the problem has a meaning," he concluded, "because it involves two contradictory solutions in practical life."¹⁴

Since this essay, according to the date affixed to its ending by the author, was completed November 20, 1877, it was not only written before the publication of the earliest psychological articles by James, but also prior to the appearance of Peirce's article in January, 1878.

⁹ *Pragmatism*, p. 45.

¹⁰ *Collected Essays and Reviews*, pp. 69-82.

¹¹ *Ibid.*, p. 76.

¹² *Ibid.*, p. 76.

¹³ *Collected Essays and Reviews*, p. 77.

¹⁴ *Ibid.*, pp. 77, 78.

A closer examination of its contents and of an essay which succeeded it in print the same year, reveals that James had also attained by 1878 a conception of pragmatism as a definite theory of truth, which differs in no fundamental respects from that enunciated over twenty years later. It is not contended, of course, that this theory was worked out in detail, but it is maintained that the two major assumptions upon which the later theory primarily depends, were clearly and concretely expressed at this earlier date. These assumptions may be summarized as follows: first, truth resides neither in objects nor ideas as such but in the activities, theoretical and practical, initiated by ideas; and, secondly, that ideas are true only when the activities they instigate successfully overcome the resistance furnished by ideas previously adopted and by the environment in which overt conduct occurs.

Let us consider the first assumption. The succeeding statements taken from James's lectures on *Pragmatism*, and his volume of collected essays, *The Meaning of Truth*, published two years later in 1909, contain his own final formulation of it: "The truth of an idea is not a stagnant property inherent in it. Truth *happens* to an idea. It *becomes* true, is *made* true by events. Its verity is in fact an event, a process; the process, namely of its verifying itself, its verification. Its validity is the process of its valid-ation."¹⁵ "Truth for us is simply a collective name for verification processes. . . . Truth is *made*, just as health, wealth and strength are made, in the course of experience."¹⁶ "Realities are not *true*, they *are*; and beliefs are true of them."¹⁷ "Pragmatism insists . . . that statements and beliefs are . . . inertly and statically true only by courtesy: they practically pass for true; but you *can not define what you mean* by calling them true without referring to their functional possibilities."¹⁸

Hence James asserted, "The most general way of contrasting my view of knowledge with the popular view (which is also the view of most epistemologists) is to call my view ambulatory."¹⁹ Pragmatism, itself, could only be proposed, in his own words, as something "to be verified *ambulando*, or by the way in which its consequences may confirm it."²⁰

Now this first assumption of the pragmatic theory of truth we find clearly implied in James's treatment of the problem of verification in his essay of 1877 on the subjective method. There he wrote in regard to the materialist's and moralist's solutions of the prob-

¹⁵ *Pragmatism*, p. 201.

¹⁶ *Ibid.*, p. 218.

¹⁷ *Meaning of Truth*, p. 196.

¹⁸ *Meaning of Truth*, p. 219.

¹⁹ *Ibid.*, p. 139.

²⁰ *Ibid.*, p. 213.

lem of the inmost nature of the world, "How can we know at present which solution is better? Now how does a scientist know if his hypothesis is right? He posits it as sound and proceeds to make his deductions, and he acts on the basis of what he has posited. Sooner or later the results of his activity will enlighten him if he has acted on a false assumption. Is not the same true in the other case? . . . The method is therefore the same here as in the sciences for proving that an opinion is well-grounded, and we know of no other method. . . . Observe only that the time required for verification varies according to the questions." ²¹

In far more striking fashion James re-asserted the first assumption of the pragmatic theory of truth in his essay of 1878, "Remarks on Spencer's *Definition of Mind as Correspondence*." Here he wrote: "The truth appears to be that every individual man may, if it please him, set up his private categorical imperative of what rightness or excellence in thought shall consist in, and these different ideals, instead of entering upon the scene armed with a warrant—whether derived from the polyp or from a transcendental source—appear only as so many brute affirmations left to fight it out upon the chess-board among themselves. They are, at best, postulates, each of which must depend on the general consensus of experience as a whole to bear out its validity. The formula which proves to have the most massive destiny will be the true one. But this is a point which can only be solved *ambulando*, and not by any *a priori* definition." ²²

Such phrases in this passage as, "depend on the general consensus of experience," "proves to have the most massive destiny," and "solved *ambulando*," simply represent the 1878 edition of James's final formulation of the first assumption underlying the pragmatic theory of truth. If more evidence were needed to substantiate the interpretation of the passage quoted, one need only refer to the following passages in the same essay which re-affirm its assertions. "This, then, must be our conclusion: That no law of the *cogitandum*, no normative receipt for excellence in thinking can be authoritatively promulgated. . . . Spencer's formula [adjustment of inner to outer relations] has crumbled into utter worthlessness in our hands, and we have nothing to replace it by except our several individual hypotheses, convictions, and beliefs. Far from being vouched for by the past, these are verified only by the future." ²³

"I, for my part," concluded James, "cannot escape the consideration, forced upon me at every turn, that the knower is not simply

²¹ *Collected Essays and Reviews*, pp. 78, 79.

²² *Ibid.*, pp. 60, 61.

²³ *Collected Essays and Reviews*, p. 65.

a mirror floating with no foot-hold anywhere, and passively reflecting an order that he comes upon and finds simply existing. The knower is an actor, and coefficient of the truth on one side, whilst on the other he registers the truth which he helps to create. Mental interest, hypotheses, postulates, so far as they are bases for human action . . . help to *make* the truth which they declare.”²⁴

Let us now consider the second assumption underlying the pragmatic theory of truth, which attributes truth to those ideas that initiate activities able to cope successfully with the resistance furnished by ideas previously adopted and by the environment in which overt conduct takes place. James’s final formulation of it occurs in the following statements taken from his lectures on *Pragmatism* and his volume of collected essays, *The Meaning of Truth*: “The true . . . is only the expedient in the way of our thinking. Expedient in almost any fashion; and expedient in the long run and on the whole . . . of course; for what meets expediently all the experience in sight won’t necessarily meet all farther experiences equally satisfactorily.”²⁵ “Between the coercions of the sensible order and those of the ideal order, our mind is . . . wedged tightly. Our ideas must agree with realities, be such realities concrete or abstract, be they facts or be they principles, under penalty of endless inconsistency and frustration.”²⁶

“I said just now that what is better for us to believe is true, *unless the belief incidentally clashes with some other vital benefit*. Now in real life what vital benefits is any particular belief of ours most liable to clash with? What indeed except the vital benefits yielded by *other beliefs* when these prove incompatible with the first ones? In other words, the greatest enemy of any one of our truths may be the rest of our truths.”²⁷ “The only *real* guarantee we have against licentious thinking is the circumpressure of experience itself, which gets us sick of concrete errors, whether there be a trans-empirical reality or not.”²⁸

Thirty years earlier, James touched briefly on the problem of the nature of “true activities” or “true consequences.” In his essay on the subjective method, he indicated that any believer’s faith in the moral character of the inmost nature of the world could only be confirmed by harmonious interaction between himself and his environment.²⁹ It is not, however, until we reach his essay, “Remarks on Spencer’s *Definition of Mind as Correspondence*,” that we find

²⁴ *Ibid.*, p. 67.

²⁵ *Pragmatism*, p. 222.

²⁶ *Ibid.*, p. 211.

²⁷ *Pragmatism*, pp. 77, 78.

²⁸ *The Meaning of Truth*, p. 72.

²⁹ See *Collected Essays and Reviews*, pp. 78, 79.

a clear and authoritative statement of the second assumption underlying the pragmatic theory of truth. This essay was published in the same year and month as Peirce's article, "How to Make Our Ideas Clear."

Here James's analysis of mind culminated in the assertion, "Every law of mind must be either a law of the *cogitatum* or a law of the *cogitandum*. If it be a law in the sense of an analysis of what we *do* think, then it will include error, nonsense, the worthless as well as the worthy. . . . But such a law of the *cogitatum* . . . is no other than the association of ideas according to their several modes; or, rather, it is this association definitely perfected by the inclusion of the teleological factor of interest." ³⁰

As regards a law of the *cogitandum*, or a regulative law of our thinking, James was forced to confess, "This then must be our conclusion. . . . The only formal canon that we can apply to mind which is unassailable is the barren truism that it must think rightly. We can express this in terms of correspondence by saying that thought must correspond with truth; but whether that truth be actual or ideal is left undecided." ³¹ Hence our individual hypotheses, convictions, and beliefs constitute, in James's own words, "in some sense laws of the ideal. They have to keep house together, and the weakest goes to the wall. The survivors constitute the right way of thinking. While the issue is still undecided, we can only call them our prepossessions. But decided or not, 'go in' we each must for one set of interests or another. The question for each of us in the battle of life is, 'Can we *come out* with it?' " ³²

James does not hesitate to warn the reader of the risk involved here in connection with the future destiny of his interests, about which nothing can be known for certain in advance. "The attempt to forestall the decision," he wrote, "is free to all to make, but all make it at their risk. Our respective hypotheses and postulates help to shape the course of thought, but the only thing which we all agree in assuming is, that thought will be coerced away from them if they are wrong." ³³

In the passage which follows this declaration, we find not only a definite statement of the relation of feeling or satisfaction to the pursuit of truth, but an anticipation of the basic arguments in James's lectures on *Pragmatism* which assert that truth is only "one species of good," ³⁴ and a species discovered by our human ancestors

³⁰ *Collected Essays and Reviews*, p. 57.

³¹ *Ibid.*, p. 65.

³² *Ibid.*, pp. 65-66.

³³ *Ibid.*, p. 61.

³⁴ *Pragmatism*, p. 75. See especially lectures V, VII.

in the course of their efforts to survive and flourish. Referring to the interests, or hypotheses, convictions, and beliefs, with which each strives to "come out" James wrote in 1878:

Some of these interests admit to-day of little dispute. Survival, physical well-being, and undistorted cognition of what is, will hold their ground. But it is truly strange to see writers like Messrs. Huxley and Clifford, who show themselves able to call most things in question, unable, when it comes to the interest in cognition, to touch it with their solvent doubt. . . . And yet these authors can hardly have failed to reflect at some moment or other, that the disinterested love of information, and still more the love of consistency in thought . . . and the ideal fealty to Truth (with a capital T), are all so many particular forms of aesthetic interest, late in their evolution, arising in conjunction with a vast number of similar aesthetic interests, and bearing with them no *a priori* mark of being worthier than these. If we may doubt one, we may doubt all. How shall I say that knowing fact with Messrs. Huxley and Clifford is a better use to put my mind to than feeling good with Messrs. Moody and Sankey, unless by slowly and painfully finding out that in the long run it works best?³⁵

What a familiar ring there is to the expressions, "in the long run" and "it works best"! The concluding statements of this essay on Spencer's definition of mind reveal clearly why James was able to combine in his formulation of the second assumption of the pragmatic theory of truth, the demands of both the ideal interests of man and those of the environment. These statements likewise indicate why moral and religious issues could maintain their intellectual respectability even from the pragmatic standpoint.

In other words, [he wrote] there belongs to mind, from its birth upward, a spontaneity, a vote. It is in the game, and not a mere looker-on; and its judgment of the *should-be*, its ideals, can not be peeled off from the body of the *cogitandum* as if they were excrescences, or meant, at most, survival. The only objective criterion of reality is coerciveness, in the long run, over thought. Objective facts, Spencer's outward relations, are real only because they coerce sensation. Any interest which should be coercive on the same massive scale would be *eodem jure* real. By its very essence, the reality of a thought is proportionate to the way it grasps us. Its intensity, its seriousness—its interest, in a word—taking these qualities, not at any given instant, but as shown by the total upshot of experience. If judgments of the *should-be* are fated to grasp us in this way, they are what "correspond." The ancients placed the conception of Fate at the bottom of things—deeper than the Gods themselves. "The fate of thought," utterly barren and indeterminate as such a formula is, is the only unimpeachable regulative Law of Mind.³⁶

If the evidence and conclusions presented in this paper are sound, James was a pragmatist before he wrote his *Psychology*, and he had attained prior to 1879 a conception of pragmatism both as a method and as a theory of truth which was complete in all essential respects.

³⁵ *Collected Essays and Reviews*, p. 66.

³⁶ *Ibid.*, p. 67.

It would therefore seem desirable to make a thorough revision of all current accounts of James's pragmatism which trace its origin either to his *Psychology* of 1890 or to his California Address of 1898.

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BOOK REVIEWS

Sir William Temple: a Seventeenth-Century "Libertin." CLARA MARBURG. New Haven: Yale University Press. 1932. xviii + 128 pp.

The writings of Sir William Temple resound with echoes of ideas of the great thinkers of the seventeenth century and illustrate some of the literary controversies in which those ideas serve as themes for many variations. Temple was, as Professor Marburg happily puts it in her Chicago doctoral dissertation, "an inquiring, impressionable, not very profound mind, trying to find a place for itself in the shifting seventeenth-century world of thought" (p. xviii). Thrice rebuffed in his pride by Charles II whom he as ambassador had loyally served, this "pompous seventeenth-century gentleman" withdrew from affairs, devoted himself to letters, and "spent the rest of his life building up his shattered ego" (p. xiv). "Temple was, before all else, the polished and rather weary Epicurean, who, after a lifetime of conversation and casual reading, finally retired to his garden to discover how most pleasantly to adorn 'the leisure of an idle man'" (p. 72). He was acquainted with the important writers of his century, but was unable to digest their ideas or to formulate clear principles of his own. In theory of knowledge he avoided both sensationalism and rationalism; in theory of morals he would follow the guidance of neither passions nor reason. But in keeping from extravagant extremes he only achieved enough to be dubbed a "well-bred dilettante" (p. 80).

Temple's chief interest to students of the history of ideas, as Professor Marburg says, arises out of his *An Essay upon the Ancient and Modern Learning* (1690). This essay was Temple's comment on and answer to Fontenelle's *Digression sur les anciens et les modernes* (1688) and Thomas Burnet's *The Theory of the Earth* (1684, 1689). It occasioned in turn quite a number of attacks and defences, and led up to Swift's *The Battle of the Books*. Temple did not know enough to enter into the dispute over "Aristotelianism" which Bacon and Descartes had made acute. But he dealt with most other phases of the controversy which raged in the seventeenth century between advocates of the old and the new. He made no

great contribution to the controversy; but his essay has interest because it reflects what the controversy meant to the educated classes of that generation.

Temple took Fontenelle and Burnet to mean that civilization is ever progressing, knowledge ever increasing, and taste ever improving. He set out to disprove this easy optimism. He did not, as Macaulay smartly asserts, hold that "the human race is constantly degenerating." Rather he maintained that human nature is at all times much the same, that outstanding achievements are occasioned by happy conditions which prevail at certain times and places, and that among these happy conditions are climatic, physiological, and political factors. This sane and plausible thesis he defended, however, by many absurd estimates of contemporary science, literature, and art. For example he doubted the Copernican system and Harvey's theory of the circulation of the blood, and stated that these alleged discoveries, even if true, "have been of little use to the world." Particularly was he inept in attacking the work of the Royal Society, though both such attacks as his and such defences of the Society as those by Glanvil and Sprat had more influence than is usually realized to-day. Yet when all of Temple's blunders are assembled, his essay hardly deserves Macaulay's judgment that its matter is "ludicrous and contemptible to the last degree." Ridiculous in detail, it is yet sound in principle. There was a telling point in his charge that the "moderns" were over arrogant in that, while changing their opinions "every week or every day," they were yet assured that their latest opinions were "just and true, and can not be deceived." If we accede to Professor Whitehead's characterization of the seventeenth century as "the century of genius," we should not forget that enthusiasts for the new were warranting their opponents in rebuking their haste and insularity.

We are indebted to Professor Marburg for making clear the error of those earlier critics who tried to dispose of Sir William Temple by merely saying that he was "on the wrong side" of a great controversy.

STERLING P. LAMPRECHT.

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John Calvin: The Man and His Ethics. GEORGIA HARKNESS. New York: Henry Holt and Company. 1931. Pp. xiii + 266.

The title of this admirable essay may mislead prospective readers. The suggestion that the author has presented a biographical study of Calvin and a treatise on his Ethics independent of theological considerations is not borne out by the text. Indeed it may well be questioned whether such an undertaking could possibly be carried

out successfully—whether the formulation of an ethical philosophy independent of theological and metaphysical presuppositions and implications is not foredoomed to failure. In any case Calvin's ethics (as well as his life) were, of course, shot through and through with theological interests, and Miss Harkness has wisely not attempted the separation which the title of her work might suggest.

She has, however, given emphasis to economic and moral aspects of Calvin's work, drawing effectively on the studies of recent scholars such as Max Weber, Ernst Troeltsch, and R. H. Tawney on the relation of Puritan ethics and the rise of modern capitalism. She does not hesitate to modify their conclusions and agrees only partially with the view that "Calvin is the source of the *Berufsethik* which made industry a dominant Puritan trait" while arguing that Calvin had much to do with the development of business ethics in a "Rotarian sense." Here, as elsewhere, Miss Harkness's anxiety to stress the relation of Calvin's ethical teachings to present problems may have misled her into a dubious phrase. The reviewer, though admiring her telling wit and such trenchant observations as that "there is still much more enthusiasm among the people of Protestant Churches for prohibition than for a living wage," is disposed to question the appropriateness of ascribing to Calvin explicit views on "companionate marriage" and the problems of unemployment.

JAMES GUTMANN.

COLUMBIA UNIVERSITY.

JOURNALS AND NEW BOOKS

PHILOSOPHICAL REVIEW. Vol. XLII, 1. Philosophy in France, 1931: *Andre Lalande*. Contemporary German Philosophy: *Arthur Liebert*. Discussions:—The Veil of Space: *A. Ushenko*. The Future of Religion: *J. R. Geiger*.

INTERNATIONAL JOURNAL OF ETHICS. Vol. XLIII, 2. Bases, Arbitrary and Otherwise, for Morality: A Critique Criticized—The Arbitrary as Basis for Rational Morality: *Charner M. Perry*. Six Criticisms of "The Arbitrary as Basis for Rational Morality": *Shailer Mathews, G. Watts Cunningham, Frank H. Knight, Walton H. Hamilton, Max Ascoli, David F. Swenson*. On the Emergence of a New World-Religion: *Sidney Webb*. The Meaning of Caste to the Hindus: *Kurt F. Leidecker*. The Moral Beliefs of College Students: *G. J. Dudycha*. Discussions:—Social Philosophy—A Challenge: *Hardy Hooyer*. The Platonic Tradition: *J. H. Muirhead*. Education in the Philosophy of Giovanni Gentile: *V. B. Evans*.

THE PERSONALIST. Vol. XIV, 1. Instinct: Natural and Supernatural: *J. E. Turner*. Machines and Civilization: *C. M. Case*. The Development of Man: *F. C. S. Schiller*.

PHILOSOPHY. Vol. VIII, No. 29. Tercentenary Celebration of Spinoza's Birth—Spinoza's Synoptic Vision: *A. Wolf*. The Place of Mathematics in the Interpretation of the Universe: *F. A. Lindemann*. Physics and Philosophy: *A. S. Eddington*. On the Conflict between Religion and Science: *Oliver Lodge*. A Phenomenological System of Ethics (II): *Mary E. Clarke*. Belief: *G. H. Langley*. Immanence and Transcendence: *Philip Leon*. Discussion:—A Note on Dialectic and Imagination: *J. S. Mackenzie*.

THE NEW SCHOLASTICISM. Vol. VII, 1. A French Critique of Édouard LeRoy's *Problème de Dieu* (II): *Howard Shepston*. St. Thomas's Doctrine Regarding Error: *L. W. Keeler*.

AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. X, 4. The City (Glaucou loquitur): *Richard Lawson*. Problem Solving by Men and Animals: *A. H. Martin*. Children's Phantasies: *Ruth Griffiths*. What is the Basis of Political Obedience?: *W. A. Merrylees*. The Basis of Political Obedience: *F. L. McCay*. Discussion:—A Contrary View of Hedonism: *James Mackenzie*.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 39^e Année, No. 4. L'immortalité spinoziste: *L. Robinson*. Le droit des peuples à disposer d'eux-mêmes: *Th. Ruyssen*. Les logiques nouvelles et le champ de leur application: *A. Zawirski*. Sur une illusion dans les théories philosophiques de l'étendue: *R. Royer*. Sur la philosophie de Ferdinand Buisson: *C. Bouglé*. Le surnaturel et la nature dans la mentalité primitive, d'après M. Lévy-Bruhl: *Ch. Blondel*.

REVIEW OF PHILOSOPHY AND RELIGION. Vol. III, No. 2. Being and its Implications: *J. A. McWilliams*. Psychology of the Religious Life, as illustrated by Zoroastrian Writings: *Jivanji Jamshedji Modi*. Existence and Value: *H. D. Bhattacharyya*. Māyā in Vedānta: Why is it called such? *Kokilesvara Sastri*. Taoism and Vedānta: *Swami Jagadiswarananda*. High Value of Avidyā: *J. F. Pessein*.

ERKENNTNIS. Band 3. Heft 2 u. 3. Psychologie in physikalischer Sprache: *Rudolf Carnap*. Bemerkungen zur Wissenschaftslogik: *Edgar Zilsel*. Behaviorismus und Gestaltpsychologie: *Karl Duncker*. Erwiderung auf die vorstehenden Aufsätze von E. Zilsel und K. Duncker: *Rudolf Carnap*. Bemerkungen zu Dubislav's "Die Definition": *Kurt Grelling*. Bemerkungen zur Definitionslehre: *Walter Dubislav*. Protokollsätze: *Otto Neurath*. Über Protokollsätze: *Rudolf Carnap*.

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XIII, Fasc. VI. Il problema dell'esperienza: *Giovanni Gentile*. Storicismo: *Ugo Spirito*. Idealismo o realismo: *Franco Lombardi*. Il punto in cui realismo e idealismo coincidono: *Gaetano Chiavacci*. Sul concetto di filosofia: *Francesco Collotti*. Irrealtà di un preteso conflitto: il pensiero e la vita: *Carlo Mazzantini*.

Allport, Gordon W., and Philip E. Vernon: *Studies in Expressive Movement*. With a chapter on Matching Sketches of Personality with Script by Edwin Powers. New York: Macmillan Co. 1933. xiii + 269 pp. \$3.00.

Bertram, Ernst: *Nietzsche. Essai de Mythologie*. Traduit de l'Allemand par Robert Pitrou. Paris: Rieder. 1932. 472 pp. 40 fr.

Descoqs, Pedro: *Prælectiones Theologiæ Naturalis. Cours de Théodicée. Tomus Primus. De Dei Cognoscibilitate, I.* Paris: Gabriel Beauchesne et ses Fils. 1932. vi + 725 pp. 105 fr.

Manuel d'Études Bibliques. Rédigé conformément aux directives donnés par S. S. Pie X aux professeurs d'Écriture Sainte. Lettre apostolique "Quoniam in re biblica" (27 mars 1906). Tome IV. Les Évangiles. Abbé Lusseau et Abbé Collomb. Paris: Pierre Téqui. 1932. 907 pp. 45 fr.

Moënner, Chanoine: *Autour du Clocher. Entretiens dominicaux sur la Paroisse l'Église, le Clergé et les Fidèles.* (Collection "Je Sème." Série Paroissiale.) Paris: Pierre Téqui. 1932. ix + 278 pp. 12 fr.

Price, H. H.: *Perception*. New York: Robert M. McBride. 1933. ix + 332 pp.

Ranzoli, Cesare: *Il Realismo Puro*. Milano: Società Anonima Editrice Dante Alighieri. 366 pp.

Reichenbach, Hans: *Atom and Cosmos. The World of Modern Physics*. Translated and Revised in Collaboration with the author by Edward S. Allen. New York: Macmillan Co. 1933. 300 pp. \$2.00.

Reymond, Arnold: *Les Principes de la Logique et la Critique contemporaine.* (Bibliothèque de la Revue des Cours et Conférences.) Paris: Boivin & Cie. 1932. xi + 280 pp. 25 fr.

Sosset, M.: *Le Rôle des théories psychologiques dans l'œuvre de Royce.* (Archives de la Société Belge de Philosophie. Quatrième Année, 1931-1932. Fasc. 1.) Bruxelles: Maurice Lamertin. 1932. 47 pp. 8 fr.

Tisserand, Pierre: Oeuvres de Maine de Biran accompagnées de notes et d'appendices publiées avec le concours de l'Institut de France. (Foundation Debrousse et Gas.) 2 vols. Tomes VIII et IX: Essai sur les Fondements de la Psychologie et sur ses Rapports avec l'Étude de la Nature. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1932. lxxi + 652 pp.

Underhill, Evelyn: The Golden Sequence. A Fourfold Study of the Spiritual Life. New York: E. P. Dutton & Co. 1933. xiv + 193 pp. \$2.00.

Walz, Georges: La Vie de Frédéric Nietzsche d'après sa correspondance. Textes choisis et traduits par Georges Walz avec Préface Biographique. Paris: Rieder. 1932. 568 pp. 40 fr.

NOTES AND NEWS

We have received the following first numbers of two new periodicals:

CHARACTER AND PERSONALITY. An International Quarterly of Psychodiagnostics and Allied Studies. Vol. I, No. 1. Of the Words Character and Personality: *William McDougall*. The Years of Puberty in a Public School: *Robert Saudek*. Familial Trends in Personality: *J. E. Downey*. Sigmund Freud in his Historical Setting: *C. G. Jung*. Typology in the Light of the Theory of Conditioned Reflexes: *J. Rosenthal*. The Functioning of Memory and the Methods of Mathematical Prodigies: *B. Sandor*. An Art Expert's Observation on Personality: *Max I. Friedlander*. (Editor: Robert Saudek, London, England; Associate Editor: Ernest Seeman, Durham, N. C. Subscriptions \$2.00 per year. Duke University Press, Durham, N. C. A German edition will be published under the title *Charakter*, Pan-Verlagsgesellschaft M.B.H., Berlin W. 9.)

LA SAPIENZA. Rivista Mensile di Revisione Scientifica. Anno I, Fasc. I. Ragion di vita. Il concetto della natura umana: *G. S. Spinetti*. Il vizio dell'oro moneta: *P. L. Boldrini*. Idealismo e bolscevismo: *R. Carbonelli*. Il Congresso della Fondaz. Volta: *L. Bianchi*. Studi su Gandhi: *E. Tedeschi*. I leoni di San Marco nella Dalmazia: *V. Alberti*. (A new journal devoted to philosophy and especially the philosophical implications of Fascist culture, edited by Gastone Silvano Spinetti, and published by the Direzione et Amministrazione e in Roma, Piazza Margana N. 24, Rome, 118. Annual subscription, 40 l.)

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There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXIX. No. 22. October 27, 1932.

Reason as Fact and as Fetich (II). HORACE M. KALLEN.
A Notation on the Problem of the Past—With Especial Reference to
George Herbert Mead. ALFRED TONNESS.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 23. November 10, 1932.

On Having Ideas in the Head. DONALD C. WILLIAMS.
Measurement Relationship and Correlation. PAUL HORST.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 24. November 24, 1932.

The Above-and-Below Notion. GEORGE R. MONTGOMERY.
Professor Driesch on Philosophical Methods of Procedure.
MARVIN FARBER.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 25. December 8, 1932.

The Missing Link in Epistemology. C. A. STRONG.
Tangling Cognition. FREDERICK J. E. WOODBRIDGE.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 26. December 22, 1932.

The Early Draft of Locke's Essay. STERLING P. LAMPRECHT.
Reflections on Infinity. RALPH B. WINN.
Book Reviews. Journals and New Books. Notes and News. Index
for Volume XXIX.

Volume XXX. No. 1. January 5, 1933.

On the Existence of a Necessary Being. JEROME GASPARD.
Book Reviews. Journals and New Books. Notes and News.

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Quarterly. General and experimental psychology. Founded 1887.
- Pedagogical Seminary and Journal of Genetic Psychology.**—Worcester, Mass.; Clark University Press.
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Monthly. Each number one complete research. Child behavior, differential and genetic psychology. Founded 1925.
- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
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Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00. 720 pages annually. Psychological literature.
Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917.
Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
Subscription \$4.00. 300-400 pages. Founded 1895. Edited by W. S. Hunter.
An annual bibliography of psychological literature.
- Archives of Psychology.**—Columbia University Post Office, New York.
Subscription \$6.00. 500 pages per volume. Founded 1906. Edited by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
Subscription \$5.00; foreign \$5.25. Acting Editor, Henry T. Moore.
Quarterly. 432 pages annually. Founded 1906. Abnormal and social.
- Psychological Clinic.**—Philadelphia; Psychological Clinic Press.
Subscription \$3.00. 288 pages. Edited by Lightner Witmer. Founded 1907.
Without fixed dates (9 numbers). Orthogenics, psychology, hygiene.
- Journal of Educational Psychology.**—Baltimore; Warwick & York.
Subscription \$4.00. 540 pages. Founded 1910.
Monthly (9 numbers). Edited by Harold O. Rugg and coöperating board.
- Comparative Psychology Monographs.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter.
Published without fixed dates, each number a single research. Founded 1922.
- Psychoanalytic Review.**—Washington, D. C.; 3617 Tenth Street, N. W.
Subscription \$6.00. 500 pages annually. Psychoanalysis.
Quarterly. Founded 1913. Edited by W. A. White and S. E. Jelliffe.
- Journal of Experimental Psychology.**—Princeton, N. J.
Psychological Review Company. 500 pages annually. Experimental.
Subscription \$6.00. Founded 1916. Bi-monthly. Edited by Madison Bentley.
- Journal of Comparative Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages annually. Founded 1921.
Bi-monthly. Edited by Knight Dunlap and Robert M. Yerkes.
- Psychological Abstracts.**—Princeton, N. J.
Subscription \$6.00. 700 pages annually. Edited by W. S. Hunter.
Monthly. Abstracts of psychological literature. Founded 1927.
- Journal of General Psychology.**—Worcester, Mass.; Clark University Press.
Subscription \$7.00. 600-700 pages annually. Edited by Carl Murchison and an international coöperating board.
Quarterly. Experimental, theoretical, clinical, and historical psychology. Founded 1927.
- Journal of Social Psychology.**—Worcester, Mass.; Clark University Press.
Subscription \$7.00. 500-600 pages. Edited by John Dewey, Carl Murchison, and an international coöperating board.
Quarterly. Political, racial, and differential psychology. Founded 1929.

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WORD-PORTRAITURE

I

THE experience of reading a book is, when one stops to think about it, a wonderful escape from the narrowness of the perspectives that define the perceptual situation whose objects are not conventional symbols. Most of the explanations I have come across of this escape from perspectivity seem to me to be analyzable either into denials of its occurrence, or into scholastic, merely nominal definitions and descriptions which succeed only in concealing the essentials involved and in introducing artificial difficulties. It is easy to maintain that no matter how one knows or what one knows, the knowing is from a point of view, hence perspective is not escaped. This is an example of the denial. An example of the verbal confusion is the argument that there can be a *general point* of view. To me this is, by definition, nonsense. If I can apprehend a general character of something, it is precisely because such a prehension can occur from no particular *point* of view, in the sense that no directly relevant "fromhereness" is discoverable in the cognitive situation.¹ A "general point" is a point with neither position nor punctuality, and that would indeed be a queer point.² But though I do not believe in the being of such oddities, it seems to me perfectly evident that the punctuality and narrowness of perceptual perspective is escaped in some simple sense, through the experience of words. The process of using conventional signs as the painter uses pigment and contour I shall call "word-portraiture," and proceed at once to its description. Two remarks, however, should first be made: (1) though we shall take the printed word as the subject for analysis, the results are intended to apply to any conventional symbol for com-

¹ In Whitehead's words, descriptive of generality, scientific objects "embody those aspects of the character of the situations of the physical objects which are expressible *without reference to a multiple relation including a perceiving event.*" *Concept of Nature*, p. 158. Italics mine. This does not deny that the concipient *organism* has a definite position in space-time.

² Leibniz would have been distressed had he been forced to state in detail what God's *point de vue* could possibly mean when, as the Monad of monads, He could not perceive—perception being confused thought—but only conceive His creatures, in the light of the universal laws of formal logic.

munication; (2) the argument loosely presupposes a realistic theory of direct perception,³ but its main contentions are sufficiently general to stand under other epistemological presuppositions:

II

A chromatic photograph of a physical object, say an oak tree, represents on a two-dimensional surface the tri-dimensional original. What aspect of the tree is to appear in the photograph depends strictly on the position of the camera with reference to the object. Such a picture or representation could hardly serve as a word in rational discourse for two main reasons: (1) it stands for a clear-cut particular, suitable for apprehension only in a sense-field where color and contour must be noticed if anything at all is to be noticed; that is, a point of view is here an altogether too relevant consideration. (2) A book consisting of such words would be bunglesome, expensive, and, despite its bulk, capable of symbolizing only a very small part of what books actually mean. It appears, therefore, that if we are to have words that serve the purposes of thought and communication, we must have representations, yes, even pictures, but not of that punctual particularity and sensory detail which animal perception can never get away from. But what else in the object is there to portray? We shall see the answer to this question develop itself in subsequent paragraphs.

Fortunately, there is a neat and natural means of escape from such perspectivity into generality, without engaging in Platonic flights into a realm of self-sufficient universals, or in Watsonian-Pavlovian excursions into a subcutaneous realm of neural integration. This means of escape can be indicated first by asking a question: is it possible for the human organism to portray *only* those characters (of the object) which he perceives from two or more points of view? For a camera it is obviously impossible. The varying detail⁴ must always appear in the photographic representation, though the invariant features may perhaps be also registered in some elliptical sense. Now no coercive, purely logical argument exists to prove that one is really aware of an invariant property on moving around the perceptum. But any argument to the contrary must hold that one never perceives, for example, things, or trees, or oak trees, since thinghood, treeness, oak-treeness are precisely those constants which

³ Such a theory I have defended in this JOURNAL, Vol. XXIX, pp. 69-78. An article introductory to the present one is in the *Monist*, October, 1932, entitled "Symbolization and Similarity."

⁴ I may seem to have asserted that the physical shape and color of the object are literally altered by the percipient moving around it at a distance. I wish only to assert that what sensible aspect the physical object is to present depends strictly on the position of the percipient.

are apprehended from all points of view in situations where perception of these objects can occur at all. Such an argument—and it is a common one—suffers from the start by misrepresenting experience. All we need grant here is *some* continuity in the series of sensible changes observed. And any empirically-minded observer moving around the tree and reporting his experience, will grant it. Then, if there is *any* continuity, it is theoretically plausible that this identical trait—*itself not a color or contour*—is such an invariant as we are indicating, and may be selectively attended to by intellection. Intellection, on this basis, turns out to be simply the organism's awareness of natural invariants. On the other hand, to deny continuity in every sense is, by implication, to assert a proposition which, as is well known, has distressing consequences, logically and empirically. But though the point merits much mooting one way or the other, let us tentatively grant the being of invariants, to see if the hypothesis can solve certain problems. We must turn now to answering the above question about the possibility of portraying the constants exhibited by the object.

Granting that, from here, I behold a dingy-green-unsymmetrical-oak-tree-leaning-to-the-left, and from there a fresh-green-symmetrical-oak-tree-leaning-to-the-right, and that a camera reproduces all these details—and more—depending on its position relative to the tree, it is evident that the mark of being an oak tree is apparent from both points of view, and the problem becomes one of representing this mark to the exclusion of those whose appearance depends so strictly on perspective. Now it would be foolish to insist that such a picture or representation should also have *relevant* color and contour. Color and contour are precisely the variables in our perceptual situation. So *if we are to have a picture of an invariant, we know both a priori and a posteriori that its color and shape must be of no account*. This to us is an important and encouraging discovery. On the one hand, we find that we can avoid attempting the impossible, that is, the task of making a portrait that is sensibly like an original which is neither specific color nor contour.⁵ On the other hand, we

⁵ I by no means deny that physical objects are specifically colored and shaped. The reference is merely to a general character they exhibit from any point of view within perceptual range, or from no particular point of view.

Miss Stebbing seems to argue that, because marks such as "tree" do not "imitate" their originals, they are therefore "non-representative." This to me is a very careless statement, and if adhered to in the letter, palpably false, as I trust my argument will show. An ambassador can "represent" his king without himself carrying crown and sceptre, i.e., without "imitating" him. Miss Stebbing's words are, "... in order that thought should be developed there is need of an arbitrarily devised set of signs that are in no sense *imitative*. Such a set of signs constitutes a *non-representative* language." *Modern Introduction to Logic*, p. 12. My italics.

begin to get an insight into the conventional status of symbols. Where shape and color do not count in the representation, the sensible shape and color they happen eventually to assume depend simply on local tastes, demands for economy, etc., of the community. And in contrast with the meaning of the conventional, the meaning of the "necessary" or extra-conventional nature of symbolism also stands out more clearly. That the object should exhibit the general mark of being an oak tree, a character capable of prehension from no matter what point of view, is by no means dependent on how you or I happen to convene on the matter. The intrinsic nature of our oak, which constitutes its oak-treeness, is to be discovered, not concocted by convention. Furthermore—and this is the important point—the logical implications of being an oak tree is a matter of the objective logical structure of nature. That being an oak tree implies being a thing, and being a thing does not imply being an oak tree, is no accident of convention. The accident of convention is that I call the object in question "oak" and "thing," whereas you may call it "chêne" and "chose."

Perhaps this indirect description of the nature of "logical pictures" or words has suggested the intent of the discussion more aptly than a direct statement could. Nevertheless, I shall proceed with a few, more direct suggestions.

Just as the image on the photographic plate stands for an original, and as even a tri-dimensional duplicate might stand for something to which it is similar, so the black characters "oak tree" stand for an original. The important difference, for a theory of meaning, is in the originals they stand for. In the first case, the original—taking our tree—is a full-blown physical object, represented on a two-dimensional surface. In the second case, the original is again a full-fledged physical object, this time, however, represented—if we could construct an actual vegetating replica—by an object which could itself literally take the place of its original in some perceptual situation without altering the nature of the latter, either for an animal or for a man. We might notice here a subtle point of difference between case one and case two. Although on the photographic plate practically all the sensory detail that is detectable in the original is registered, nevertheless the mere fact of the translation out of three dimensions^o into two seems already to give the surface image less sensible variability than exhibited by the bulky original, for the percipient moving around it. We all have seen how the eyes of a person in a picture follow us about the room, our point of

^o I trust the reader is not inveigled, by my reference to three instead of four dimensions, into the belief that the theme of this paper is thereby invalidated. The argument is simply that there are thick realities and thin ones, capable of a kind of translation into one another.

view making less difference as to what we perceive than when the staring eyes are living eyes in a living head. Then there is only one position, directly in the line of their vision, in which we perceive that we are being perceived. Now a simple geometry of spatial perspective can explain much of this effect, but I believe not all of it. A picture, *as a representation* and not merely as itself a physical object, is an attenuated reality, and the thing for us to note in passing is that such attenuation occurs *pari passu* with the discovery of general traits, in the experience of which the point of view of the experiencer becomes of less and less account. The portrait contains—though in a small measure—certain descriptive elements or general traits which make it comparable to a singular name, since it stands for a unique complex but consists in general terms; whereas the actual physical duplicate is itself simply another individual, comparable *as a representation* to the proper name, which in the logical sense is not a *description*, since it portrays an individual by itself being an individual exactly like it. Such a representative relation is established by convention.

But it is in the original for which the black marks “oak tree” stand that we, as beings capable of intellection, are primarily interested. This original, it has been suggested, is not a full-fledged physical object. Of course, if we prefix “this,” then “this oak tree” may indeed name such an object, given in perception. But what we sought to formulate was a representation that should portray nothing but that in the object which is prehensible from any two or more perceptual—or metaperceptual—points of view. We attained our end by using characters whose shape and color were of no account. To establish the relation of “standing for” between the logical picture “oak tree” and its referend is a conventional gesture, consisting either in holding up the portrait beside the portrayed and saying, let this represent that invariant in the object, or in describing its referend by the use of other word portraits whose originals are already known. Genetically speaking, of course such gestures were not self-conscious, back in the days when pictorial representations began to stand for real originals and to suffer the process of refinement for the sake of economy and general significance. A man can, none the less, discover what he was doing unawares after he has done it. Our analysis claims to be a discovery of this kind.

The discovery turns out, on further examination, to be wider and richer than we first suspected. Having detected the constant character of being a tree in the object, and having portrayed it by the logical picture “tree” to the exclusion of the variables, we discover now that this abstract original is precisely the character detectable, not only in this individual oak we have been inspecting, but in an

indefinite number of *similar* individuals. At first blush, this may astound us. But had we from the first been more aware of the implications of our procedure, we might have inferred this consequence, and realized the sense in which our analysis is directed on the fact of similarity. We portrayed the invariant represented by "oak tree" by sketching what remained after aspects apparent only from this or that point of view had been eliminated. What escaped our notice was that we, as engaged in word-portraiture, might just as well have stood still and had the tree shifted about us by artificial means, and attained precisely the same results by picturing the characters that remained constant to view. In short, what we have been picturing all along is by nature that which can be taken cognizance of, despite the position—or date—either of the percipient or of the perceived individual. Let us thoroughly grasp the significance of this proposition. If two or more *positions* of an identical object make no difference to the prehended character, then two or more *objects* in those positions might just as well exhibit that general trait. When this actually occurs, the objects are said to be to some extent *similar*. The *existence* of two or more individuals that are in some way similar is explained by the *being* of general traits which, *as such and without further specification*, are not anywhere or anywhen. The reader need not recoil from this statement, because in the first place it does not assert the existence of any real thing (*re-ality*) that is spaceless and timeless, and in the second place it does not assert that an identical *sensible quality*, such as this patch of red, can be in two or more places at once. Cases of sensibles are cases of variables, dependent on point of view. Qua visible surface quality, colors are not universals. What is invariant in the color situation is not this patch of visual quality similar to that one, but what the logical picture "red" stands for, or, still further up the scale of generality, what "color" stands for. "Color," in point of logical form and as a logical picture, is every bit as much a general name as "tree." Both represent the logical constants that remain after sensible variables have been excluded from the representation. Furthermore, just as the recognition of the object in perception—"this tree"—requires the prehension of the general character represented by "tree," so the recognition of a visual quality requires the prehension of its general character represented by "red" or "color." What we mean by "color" is this general trait, and we "specify" in some concrete situation by prefixing "this" and pointing with a finger. The important difference—and it is really an extra-logical one—is again in the status of their originals. "Tree" may stand for a qualified physical thing, where the prefix "this" is used, whereas "this color" could stand only for

the quality of a thing, even in those cases where colored light is projected into a dark void.

But how, one legitimately asks, can I discern in this particular object, which is definitely located and dated, characters which are not definitely located and dated, indeed which are nowhere and nowhen? The answer is important not only for the theory of word-meanings, but for the theory of knowledge.

The assertion that "the object" has definite position and date is elliptical. When its intent is made explicit, we find that for "the object" we must substitute "the physical object," if the assertion is to be strictly true. In other words, "the object" of our experience, even in the case of a perceptual situation, is really broader than "the physical object." And of the object, in this wider sense, it would be false to say, without qualification, that it is definitely located and dated. The object has a hierarchical structure of more and more general characters, the more specific implying the more general, so that if the object is taken to include this logical scaffolding we can not assert simply that its locus in space-time is absolutely determinate. In this sense, something about the object, even in cases of perceptual recognition, is literally nowhere and nowhen, precisely because the object exhibits characters which, as we have seen, require no relevant physical frame of reference for their prehension. That the object is here or there, now or then, makes no difference. "Entity," for example, is the logical picture of what might be called an objective category, determining that any x in nature shall be an entity, no matter where or when it may happen to be. If we can grasp this trait, we experience something about the object to which time and place are irrelevant.

The answer so far, therefore, is that "the object" in the sense indicated is not definitely located and dated. Hence to perceive "in" it—"in" not designating *physical* inclusion—characters which are nowhere is not so paradoxical. That brings us to "the physical object," and to the question, how do weprehend *in it* characters which are nowhere and nowhen? The answer is, we do no such thing—if, after making an analytical distinction, we mean by the "physical object" the complex of properties whose description *does* require a space-time frame of reference.⁷ But this is almost tautological, and evades the real issue. Do I not, when I turn

⁷ It should be noticed that "points of view" or "frames of reference" are by no means intended in this article to argue either mentalism or materialism. However, the points of view I have been referring to in this paper are to be taken as physical positions in the four-dimensional continuum, perspectives in which perception may or may not occur. Such perspectivity is what the organism escapes to the extent that it becomes aware of—may I call it—the logical dimension of nature.

to gaze in that direction, perceive *there* an *entity*, and does not this localize in space-time what has been said to the spacetime-less? Let us point out the sense in which the answer is negative. What I perceive *there* is more accurately represented by the logical picture "this" or "that," *where these are portraits of the terminus of any overt physiological reference*, such as pointing with the index finger or with a tilt of the head. On the other hand, when I perceive⁸ what the logical picture "entity" in the above question stands for, and where this factor is underscored—i.e., analytically distinguished from clear-cut contour and color represented by "this"—then the object of my experience is not *there* in a position to be indicated by physiological reference. It should not require much argument to convince one that an "entity," as such and as nothing more specific *also*, is simply nowhere. We can even admit that it is no existent whatsoever. But we would get into difficulty if we denied that "entity," as a word-portrait, represents a certain feature of the logical structure of the world.

Two or more objects are *similar* precisely by virtue of such characters as are not anywhere, not even in "the physical objects" that are similar. To elucidate: a good part of recognition is said to depend on similarity. Why is this true? Because when there is recognition—call it cognition if you will—there is awareness not only of *this* complex physical object *there* from *here*, but also of those invariant characteristics which mark the object as being the same regardless of sensible perspectival variation, or which "classify" it as a certain "kind" of thing. Prehending such invariants is being aware of what the object is, over and above the awareness that it is. And, furthermore, it is these logical traits in the object which give it that significant—shall I say—depth, traits which "dissolve and dissipate" (Coleridge's words) the brittle definition of sensory detail, and which make it possible for the knowing organism to embrace in perception much more of the object than is "given" in just this or that knife-edged physical perspective. Who has not had moments of being intimate with—yes, even in direct perception—the whole of some body (or somebody) whose presence has long been familiar? The fact of there being surface-spreads of color which the object does not present, because the percipient can not behold it from all external positions at once, does not at all argue the falsity

⁸ I have deliberately been using "perception" in a sense that does not clearly distinguish it from intellection or conception, because up to this point we have been concerned with *cognitive* situations where perception merely plays the dominant rôle: "Rational" cognition, presupposing direct intercourse with the abstract originals of such representations as "tree" and "object" to the exclusion of sensory detail, plays a dominant rôle where marks significant by convention are the sensible items of experience. See below for the hitherto missing distinction.

of the suggestion contained in the above question. And we have described those features of subject-object situations whereby the narrowness of a point of view is escaped.

Now because we have introduced the fact of recognition into the field of perception, we must not hesitate to admit that at least this much cognitive ability is exhibited by animals. In opposition to Kant, we hold that animal percepts are not blind, because, on observation, animal behavior undeniably turns out to be marked by perceptual recognition which, as we have seen, involves awareness of objective characters relatively independent of time and place. But, having admitted this continuity between animal and human behavior, let us proceed to indicate a tremendously significant difference, one which most psychologists and many epistemologists are prone to cover up by such blanket-terms as "greater complexity." The indication of this difference brings us out of the more epistemological considerations of this essay back into the theory of word-meanings.

Ever since man became capable of reflective analysis, he has noticed and asserted that animals are to be distinguished from men by their inability (1) to use signs significant by convention, (2) to deal with generalities or "abstractions," (3) to acquire extensive control over the environment. Let us very briefly touch on these three points, which really are closely interconnected. (1) The proposition that animals can not use conventionally significant signs means that the animal has no power to *select for portrayal* such logical invariants in the object as we have indicated above. (2) The second proposition suggests the fact that the full physical status—in the sense defined—of data in animal perception is *directly* relevant to animal behavior, though general traits also are involved as described; the latter are never objects of response *to the exclusion of sensory detail and space-time configuration*. In (3) it is suggested that the animal has little control over its environment, because *to the extent that the spacetime-less characters are not isolated for selective prehension, the narrowness of spatial perspective is not escaped*; and consequently there is less of that subtle "circumvention"—that bodiless going in and around—of the environmental objects, a transaction which, as we have seen, is accomplished by intellection.

Instead of distinguishing animals from men by indicating what the former can not do, we might have made the distinction by describing what the latter can do. But the result would have been essentially the same. Man rarefies his experience by substituting word-portraits for the objects of the predominantly perceptual field.⁹

⁹ This laying bare the structure of nature by using symbols which strip it of its sensory vesture seems to be an important theme in Cassirer's *Philosophie der Symbolischen Formen*.

And because these portraits represent primarily only those characters of the object to which time and place are irrelevant, he is enabled, by and in their presence, to contemplate a non-existent realm in which the where and when of his body and of the book in his hands become of no account, a realm which reveals itself to him as the timeless register of a determinate past and indeterminate future, and of things beyond the spatial peripheries of his perceptual field. In it, he knows these entities, thus exhibiting the logical structure of nature on which he swings himself, as on a cosmic trapeze, to the rhythm of thought. So he *circumvents* his physical environment, by *inventing* novel realities and *preventing* the recurrence in the future of what in the past has injured him. This, then, is the answer to our original question about the wonderful efficacy of a book to "blunt" a perspective, or to free us from the narrowness of a "point of view."

A final word about word-portraiture before passing on to some applications of our theory in the next section and to meet some objections in section four: I have spoken as though all the printed symbols in a book are general terms, because it is on generality that the escape from perspectivity depends. What of proper names, verbs, prepositions, conjunctions, etc.? The answer is fairly simple: what distinguishes, say, a verb from a preposition is more related to differences in their special referends—activities and relations respectively—than to these words *as portraits*. As logical pictures, portraying the *general* traits of these referends—those characters that even in the case of activity or relation are capable of being known regardless of particular position and date, and by which they can be "classified"—their nature *qua* conventional representations is not essentially other than that of the terms ordinarily called general names. The proper name, being by convention an exact and detailed duplicate of some individual, is certainly a more colorful portrait than the picture which stands *only* for abstract characters, but inasmuch as it *also* portrays the same individual at this or that place or time, not particularly from here or there, it is a representation of those invariant aspects of Tom or Dick in virtue of which *recognition* of him can occur. The point is that it would take an indefinitely long list of *other* word-portraits to describe completely what "Tom" stands for, whereas the list completely describing the abstract original of the portrait "tree" would be shorter.¹⁰ As for adjectives, we

¹⁰ It is my conviction that description in either case could not be complete. The completion occurs only when the originals, concrete in one case and abstract in the other, are denotatively—not descriptively—given in experience and known by acquaintance. Unless description leads in the end to some such "confrontation," there is no end to description—and consequently no knowledge at all. But I can not go into this matter here.

have already indicated above how they, as word-portraits, are general terms.

Even as there are word-pictures of nature, so are there word-pictures of word-pictures. The latter constitutes the science of grammar. Words are classified and systematized according, as we have suggested, to the kinds of originals they stand for, and "common usage" is criticized on a basis of adequacy and convenience. Grammar differs from logic, inasmuch as the latter is an analysis of the objective implicational structures of the completely *general* referends of certain word-portraits, such as "*x*" or "*2*"; whereas the former analyzes the system of word-portraits itself, describing it in general terms such as "conjunction," "adverb," etc., with only a secondary reference to the nature of the objective originals it represents.

III

Now let us see how our theory behaves in the presence of certain well-known problems.

A valid inference from the above account of word-portraiture is this: nothing is a word that is not a representation, significant by convention of an original; and nothing is a proposition that is not a complex of such representative words. Now we are in a position to put our theory of conventional symbolism to a test or two. The problem for which the Theory of Types was formulated is a familiar one. If a proposition can be "about" itself, or itself be a member of the class it delimits, we get into difficulties. How does our theory solve the problem? Thus: "All propositions are false" must, if it is to have the status of itself being a proposition, be *representative*. It must represent, be a complex word-portrait of, some complex original distinct from itself. This asymmetrical otherness relation of representation between portrait and portrayed is the *sine qua non* of truth or falsity, since these latter are relations of adequate and inadequate correspondence between word-portraits and their originals. Now either "All propositions are false" is a representation or it is not. If it is one, it may be either true or false, according as it does or does not really portray the truth-values of all propositions which constitute the *original* it pictures and which consequently are distinct from it. If it is not one, i.e., if it is a *presentation* standing for no original distinct from it—which it would have to be if it made the claim of being "about" itself—then, like the proverbial lamp-post, it is neither true nor false, for it is not a proposition. As a painting in a picture-frame can not significantly be said to picture itself, so a proposition meaning itself is nonsense. Propositionally, it means absolutely nothing, whatever else it may mean as printer's ink on paper.

Consider Epimenides the Cretan. Could he truly say, without qualification, "All Cretans are liars"? This case is different from the one above, because here our proposition is not about propositions, but about something else. If by a lying Cretan is meant one who is never capable of formulating a word-portrait that stands for something, and if the proposition "All Cretans are liars" is true without qualification, then obviously Epimenides could never write or say it. If he could sketch this word-picture, then it could be true only with further qualification, such as by the addition of the pencil-stroke "except Epimenides." Suppose, however, Epimenides were always a liar and one day he happened across a true inscription in stone—written by an Athenian—to the effect that "All Cretans are liars." Could Epimenides *recognize* the truth of the proposition? If lying is nothing more than deliberately misrepresenting things, certainly Epimenides could recognize its truth. A man can know himself to be an inveterate liar. But, being a Cretan and a liar, when some one asked him what he had read, he would say, "Some Cretans are not liars"—a false proposition. The matter swings pretty heavily on how "liar" and "lying" are defined.

Another application of our theory: let us examine the word-portrait "round square," in the light of our account of conventional symbolism. There is a distressingly large number of professional philosophers who declare that they can "think of" round squares. I believe what they mean is this: they can *perceive* the *presentation* "round square"; and since "round" is a picture of the logical invariant circularity with which most rational beings are familiar and "square" is a picture of the familiar logical invariant squareness, the *pen-sketch* "round square" is a familiar object. I am perfectly certain, however, on all the empirical, logical, introspective, and extrospective evidence at hand, that no one has ever contemplated the incompatible *originals* of these word-pictures as a single simple objective character. It is mathematically demonstrable that the portrait "round square" can never stand for anything, and we have seen that where the two-term representative relation is absent, the so-called symbol collapses into a mere presentation, verbally meaningless. Such portraits as "unicorn" differ from those of the logically impossible order, since it is possible that unicorns exist. We can "think of" unicorns, possible entities which, as originals, are distinct from the word-pictures of them.¹¹

Lastly, consider the problem of negative facts. It is argued, on the basis of a distorted correspondence theory of truth, that negative facts must exist to make certain negative propositions true and perhaps certain affirmative propositions false. What makes "Men

¹¹ See final paragraph for comment on imagination.

are not quadrupeds" true is its correspondence with the fact of the non-existence of four-footed men. What makes "Men are quadrupeds" false is its discord with the same negative fact. All this, in the light of our theory, looks like unnecessary hence artificial complication. All negative symbols like "no," "not," etc., are merely symbolical devices, such that the propositions which contradict the propositions in which they appear are to be taken as having no denotative or representative relation to fact. An illustration or two: "This is not a kangaroo" is a true proposition where "This is a kangaroo" does not picture any object in the perceptual situation; that is, where the latter proposition does not represent anything given. Where "Nothing is worth while" is a true proposition, it is not rendered true by the negative fact of the non-existence of instances of worth-whileness, but rather by the fact that "something is worth while," as a word-portrait, can not get into a representative relation with anything factual. In short, negative propositions may be true by reason of the failure of their affirmative contradictories to portray the object in this or that universe of discourse. And cases of false affirmative propositions—"Men are quadrupeds"—are simply cases of word-portraits which misrepresent rather than represent the fact in question, whereas a false negative proposition is one which shears its affirmative contradictory of a representative relation which it actually has in a given context. There are no negative facts. And a correspondence theory of truth such as is suggested here does not require them.¹²

IV

The reader, if he is a pragmatist and has read this far, has done nobly. I propose, in conclusion, to meet two objections which he and certain idealists may have been making all along. We have argued above that a good part of recognition depends on those general traits in the object, those invariants of which the rational organism becomes intellectually aware by moving around the object and eliminating the sensible variables. The pragmatist might legitimately object to this theory of meaning and knowledge on the ground that a man could move a dozen times around an unfamiliar object, verbally portraying its invariants such as "thing," "unit," etc., and still be none the wiser as to what the object is. His knowledge would be too abstract to be called knowledge. Real knowledge occurs only after he has come to grips with the object, manipulated it, dis-

¹² The correspondence here indicated is between portrait *in nature* and portrayed *in nature*. Hence the dualism is not epistemological—direct knowledge of both may occur—but it is rather a dualistic theory of conventional symbolism and of truth as a representative relation.

covered its causal efficacies and its instrumental values for further adaptation to and transformation of the environment, its ideal worth in the current of human aspiration.

I find this objection pointless, because it is not pointed at anything I have said. It has always seemed hazardous to me to deny that there are "causal meanings," i.e., cases of the causal relation—in both senses of physical and final causation—taking on a wealth of significance in the flux of material and animal energies. But our problem was to discover precisely that in nature by virtue of which such phrases as "transcending a point of view," "escaping physical perspective by reading a book," acquire their own legitimate and natural significance. We would have defeated ourselves from the first had we indicated only such meaning as is immersed in time and moored to place. The pragmatist is eager to show that, wherever you have *concrete* meanings, you also have space-time contexts. I grant the truth of his proposition. But I go on to assert that, to the extent that you have *abstract* meanings, you do not also have directly relevant space-time contexts. And a part of cognition—the more logical and mathematical part—could not occur in the total absence of such meanings. I should further contend that, *as an explanation of the common experience of escaping this or that narrow perspective*, the conception of an abstract logical structure, consisting in general traits analytically discoverable in nature, is more adequate than certain Heraclitean conceptions, to-day much in vogue.

The other objection is more idealistic than pragmatic. The account here given of word-portraiture might mislead one who could read but never had read, say a novel, into the belief that it is a pretty pale and chill affair, involving cognition only of abstractions. In other words, what is missing is a theory of imagination, to account for the wealth of colorful though tenuous detail which becomes the object of the sympathetic reader's experience—that complex, pellucid panorama which differs with each individual reader. Again, I do not dare to deny the importance of a theory of imagination for our theory above, but it seems obvious that the former could be supplementary rather than refutative. We have no room for it here. Moreover, the fact remains that a scientifically-minded reader *can* read and understand a novel without using much imagery, and that the theory of imagination is not directly concerned with the description of such skeletal, logical aspects as *are* and do not *become*. And it is precisely these that must be indicated to explain the escape from perspectivity. Even where, as in a novel, the originals portrayed by words are so often the emotional reactions of heroes and heroines rather than the mathematical structures of physical subjects to which physicists attend, it is the *general* character of feel-

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ings that is described by words. In so far as feelings, desires, etc., are *similar* to one another and to other things, they too have a logical structure, traits that may be apprehended irrespective of point of view and sketched by the word-artist in the pages of a book.

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BOOK REVIEWS

- University of California Publications in Philosophy.* Edited by
GEORGE P. ADAMS, J. LOEWENBERG and STEPHEN C. PEPPER.
Berkeley: University of California Press.
Volume 13, *Studies in the Problem of Relations.* 1930. 217 pp.
Volume 14, *Studies in the Nature of Facts.* 1932. 232 pp.
Volume 15, *Causality.* 1932. 231 pp.

A reviewer with the temerity to undertake in a single notice a survey of three volumes of University of California Union lectures, each containing seven or more closely reasoned articles, may be expected to search out in advance some apology for the inevitably summary character of his observations. Economy of space is always available as an excuse for brevity. Or the fact that the most recent of these volumes completes the tenth year of this important series might perhaps be made an occasion for congratulatory generalities. But the only good excuse for generality is the presence in a subject-matter of pervasive tendencies which may with profit be isolated and considered on their own account. It is with such tendencies, so far as they are discoverable, that this review must concern itself.

The essays fall into three main groups, with perhaps a sub-group to be mentioned later. There are, in the first place, a number of papers which deal only with a somewhat special phase of the general topic of the volume and which, but for their length and somewhat discursive manner, might have appeared as appropriately in any one of the current journals. With these, interesting as they frequently are, it is impossible here to deal at length. Worthy of particular mention, however, are Mr. Marhenke's thorough analyses of "The Reality of Relations" and "Fact and Descriptive Reference" and Mr. Pepper's careful criticism of C. I. Lewis' epistemology in his essay on "Categories." Mr. H. C. Brown in "Causality and the Cosmos" makes a daringly speculative use of recent science and arrives, with its aid, at "an a-determinate substance the random splashings of which exhibit the forms of space and time as aspects, and result in particularization in entities that tend to hold such character as they may chance to acquire" (*Causality*, p. 61). At the opposite extreme in this kind is Mr. L. J. Henderson's meticulous

"Approximate Definition of a Fact." The "operational method" employed in this analysis seems, unfortunately, to consist in somewhat elaborately eliminating practically all aspects of the problem—the nature of "fact"—which are philosophically important. The procedure is, from the standpoint of philosophy, at once over-complicated in its method and unduly simple in its conclusions. It thus furnishes additional evidence for its author's contention (*Facts*, p. 200) that the appropriate methods of science and metaphysics are by no means the same.

The papers of Mr. Lenzen fall somewhere between this group and a second. On the borderline between science and philosophy, it is their useful function to elucidate the findings of the more abstract sciences in their relation to the topic of each volume. Thus on *Relations* we find "The Nature of Geometrical Relations," on *Facts*, "The Metaphysical Import of Scientific Facts," and on *Causality*, "Physical Causality." In the expository sections of his lectures, Mr. Lenzen deals helpfully with elementary but essential considerations which philosophers are all too likely to overlook. His insistence (*Causality*, p. 88) that "the classical physics which assumes causality in the macroscopic order is presupposed in order to demonstrate the failure of causality in the microscopic realm" is an instance, and there are a number of others.

On the "metaphysical import of scientific facts" his attitude is, it seems to me, more dubious. He describes a science as "the detailed study of given and possible aspects" (*Facts*, p. 170) and appears to conclude that such a study, since it can be worked out independently of epistemology and metaphysics, leaves the findings of science equally compatible with mutually conflicting theories in these latter fields. But it is surely one thing to see that a scientist, in his professional capacity, need not concern himself with philosophical problems and quite another to hold that the facts about the world which science reveals do not support one speculative theory rather than another. If Mr. Lenzen had distinguished these two assertions, he might have been able, without compromising the independence of scientific inquiry, to bring his "theory of objects" into more fruitful relation with constructive philosophy. As it stands, it seems to be a way of describing scientific results in philosophic terms, as "aspects," for example, and at the same time ignoring the philosophic implications of such terminology.

The second main group of essays is concerned with what is perhaps the orthodox—or at least the predominant—view among the University of California philosophers—that methods of analysis and interpretation, and hence the "facts" which such methods reveal, are relative to the metaphysical "standpoint" or "perspective" from which the analysis is made. Even data are ultimate only for some

theory which accepts them as such; they are, as Mr. Pepper observes, not so much data as *datanda*. In the volume on *Facts* this thesis is maintained by Messrs. Pepper, Loewenberg, Roellofs, and Adams in what amounts to the most considerable demonstration of "the inevitable admixture of theory in any possible knowledge of fact" (*Fact*, p. 204) which recent philosophy has provided. And the same view had already been cogently presented by Mr. Loewenberg and presupposed by Mr. Adams in the preceding volume. It reappears, finally, with Positivism as its explicit antagonist, almost throughout the lectures on *Causality*. Indeed the topics for the last two volumes must have been selected especially to present this viewpoint and to contrast it with its most obvious alternative.

The lectures in this group are in general, then, and without prejudice to the real diversity of their special viewpoints and methods of approach, variations on a single theme—that any ultimate problem, carried far enough, requires for its solution metaphysical preferences and assumptions which it is easier to formulate and to elucidate than to justify. They serve as a sort of coöperative introduction to metaphysics, indicating the speculative entanglements of such notions as "relation," "fact," and "cause," and bringing the reader to the threshold of this metaphysics, only to leave him—as a one hour lecture must—before he has got too deeply involved in the subject itself.

Most characteristic here are Mr. Loewenberg's essays. "The Question of Priority" is the most systematic statement of his philosophy that we have yet had, and its treatment of "logo-centric," "bio-centric," and "psycho-centric" predicaments affords impressive evidence of the *centeredness*, the perspective character, to use Mr. Adams' term, of major types of philosophy. In "The Factiousness of Qualified Factuality" a very effective restatement of this view is given and in his paper on "The Elasticity of the Idea of Causality" Mr. Loewenberg, like the discerning reader, is "not surprised" to find a confirmation of a now familiar thesis, as well as a valuable analysis of the special problems involved. Mr. Roellof's essay, "Factuality a Regulative Ideal," fits in neatly with this viewpoint, as its title indicates, and Mr. Mackay's "Causality and Effectuality" stresses its relation to the views on "perspective" of Mead and Dewey. Mr. Pepper applies a variant of the same doctrine in his attack on "indubitables" and defense of the philosophic importance of relatively indeterminate but reassuring "Middle Sized Facts" (*Facts*, p. 3 ff). And Mr. Adams brings the whole matter to its most systematic expression in the closing essay, "Fact and Perspective," in this important volume.

The volume on *Causality* might at least as well have been titled

"Positivism and Metaphysics," for it is on these rival methods that the discussion really hinges. The attempt to isolate some "factual" or "scientific" meaning for the causal relation, and to eliminate all extraneous notions of "necessitation," whether logical, telic, or dynamic, is skillfully made by Mr. Schlick, happily present to expound the positivistic doctrine in what may be taken as the reigning current version, and by Mr. Dennes. A similar attitude had already been exemplified, under the Wittgenstein influence, in Mr. Prall's disposal of logical necessitation in his paper on "Implication." Since this seems to be the fashionable method at the moment of reinstating some primary discipline whose precise limits are the boundaries of intelligibility and beyond which it would be meaningless or "fatuous" for philosophy to venture, its representation here is particularly timely.

Mr. Schlick holds, with ample illustration from science and common sense, the familiar view that "in science causality stands for possibility of extrapolation" (*Causality*, p. 119) and more generally that "the criterion of causality is successful prediction" (*ibid*, p. 120). But, as Mr. Pepper pertinently observes (*ibid*, p. 200), the possibility of prediction refers to characteristics of events and it is in these, and not in the propositions that predict them, that we should look for causality. Whether Mr. Schlick would regard an inquiry into that structure of events which justifies prediction as legitimate, or even as meaningful, is doubtful, yet short of it, the *philosophical* issue about causality has not even been raised. Mr. Dennes is more explicit. "The future," he says "can be predicted, i.e., guessed at or expected, but it can not be known. To conceive causation as a sort of necessitation that would verify the future reference of inductions, is to try to lift ourselves by our bootstraps. We have noticed instances of functionally correlated processes and have expected more instances of such processes. So far such expecting has been a useful habit. But we know nothing as to how long it will continue useful" (*Causality*, pp. 175-176).

The negative result thus reached is, again, in harmony with Mr. Prall's ingenious and—to me—somewhat baffling view of "Implication" (*Relations*, pp. 127-163). Here "rational certification" is reduced to logical relations in discourse, these (à la Wittgenstein) to the possible truth combinations of elementary propositions and such possibility, purged of the superstition of necessity, is found to be "a symbolic expression of the ways in which we find sensuous characters related in experience as present together, or both absent, or one present and the other absent" (*Relations*, pp. 161-162). The conclusion is that "rational certification only exhibits the fact of a repetition of assertions based on sense experience" (*ibid*, p. 162). It is not sur-

prising that after so wholesale a simplification Mr. Prall can find no grounds for a rational metaphysics—which, indeed, he finds to involve a “plain contradiction.” Such grounds in any case would hardly have been included in that calculus of truth combinations to which he has chosen to reduce “rational certification.” It seems to me that this method of philosophical analysis, with much of the positivism that accompanies it, could fairly be described as straining at a gnat and swallowing a camel, the former process, with its unduly narrow definition of reason being officially termed scepticism, the latter, with the “naturalism” it implies, “animal faith.” It may be that the camels go down more easily after the over-scrupulous preliminary, but the method is hardly to be recommended as an aid to the normal processes of digestion.

A more fundamental objection to this whole positivistic attitude is the one advanced by Mr. Adams in his extended critique of Hume (*Causality*, p. 215 ff.) and summed up in the statement that “Positivism is just bad rationalism.” It is legitimate to limit one’s attention to certain aspects of the world, whether in logic, physics, or common sense, but to treat such limitation as prescriptive for philosophy and to describe as meaningless or “fatuous” such facts as a special method of analysis finds not to its purpose is to trust too much to abstract reason. The further discovery that such “reason” is too narrow to describe the world is natural enough—hence the trend toward mysticism, animal faith, and the like—but it holds only against the bad rationalism for which its own method was responsible. Mr. Adam’s appeal back from such abstraction to that “primary experience” (*Causality*, p. 208) out of which it has arisen is at least the necessary preliminary to a satisfactory solution of philosophic problems. And such a reference takes us clear beyond the limits of positivism—whether in logic, recent science, or every-day life.

So far, then, the metaphysicians seem to have all the best of the argument. But there is a further question, and one that they have not all dealt with in so forthright a fashion. Suppose we grant that “fact” can not be divorced from interpretation, and ultimately from metaphysical interpretation, which among such interpretations are we to choose and what objective basis can be had for them? To refer us back to “pre-analytic data” or even to the somewhat more determinate “middle-sized fact” will not do, since these are so remarkably elastic as to accommodate themselves to alternate theories and hence to furnish no decisive ground for a choice between them. And to say, as Mr. Loewenberg’s “Problematic Realism” seems to do, that “the inherent nature of the real remains for us problematic” (*Relations*, p. 68) seems no more than a way of treating a statement of the problem as if it were itself the solution. For surely whatever

the intrinsic nature of reality may be it is not for itself a problem while what it is *for us* is, on this view, not its inherent nature.

Only in Mr. Adams' papers do we find a thoroughgoing attempt to meet this further issue, to treat the relativity of fact to interpretation, of process to form, as the beginning rather than the end of a metaphysic. For this reason they belong in a class by themselves and constitute by all odds the most substantial contribution of the volumes in which they appear. Rarely has the question been put in a more challenging form. "Are there any rational loyalties?" Granting that preference and selection are unavoidable in philosophy, can we not find in the subject-matter itself the reason for such preference and thus achieve a rational metaphysics which, so far from being a "plain contradiction" is no more than the completion and clarification of our basic attitudes toward the world? The answer here given is impressive: "The generation in our human perspectives of our types of theory and our attitudes is elicited by the material with which we are dealing, material which we do not manufacture. Our use of that material, its transformation in inference, judgment, and theory, is unquestionably the product of a human manufacture. But it may also be the disclosure of the intrinsic structure and nature of the factual material supplied to us" (*Facts*, pp. 222-223).

So far so good. What is wanted now is such an application of this philosophy to the major fields of experience as will make this disclosure concrete and specific. And it is here that Mr. Adams' theory is not merely incomplete, but also one-sided. His illustrations of the way in which organizing principles are immanent in their material are uniformly drawn from the fields in which traditional idealism has found its stronghold—the relation between apprehension and judgment, meaning in discourse, impulse and moral purpose, and the like. All this is helpful, but it falls within the familiar pattern. What is wanted is some effective relation between these fields and those of science, industry, and the like, in which constructive effort is less obviously a disclosure of the structure of its material. It is not yet clear how Mr. Adams means to establish a connection with these recalcitrant materials or whether he is not, after all, merely restating that idealistic position which tended in the long run to ignore them.

It seems to me, then, that Mr. Adams, having gone so far with this important question, can not well avoid going farther. And it is here that a criticism may be in order. Useful as these lectures are as an introduction to metaphysics, the limitations inherent in the circumstances of their presentation compel them at times merely to suggest some farther insight whose elucidation is annually postponed. More than once the reader finds that a subject, most artfully introduced,

bows itself out at just the point at which we are beginning to feel acquainted. The next volume, starting from a different angle, brings us once more in sight, but only just in sight, of a better understanding. If the matter at issue were not so important one might be more readily content with the recurrent introduction. As it is, however, I for my part have learned too much from these lectures not to ask for more than hope deferred, and hence for more than a series of this sort can reasonably be expected to provide. For such a systematic philosophy the Union lectures, now long recognised as a valuable preliminary, can hardly become an adequate substitute.

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Science and Thought in the Fifteenth Century. LYNN THORNDIKE.
New York: Columbia University Press. 1929. 387 pp.

In *Science and Thought in the Fifteenth Century*, Professor Thorndike has dipped into a mass of material, still largely unpublished and unknown, of the period of the High Renaissance and has given us a series of pictures of the state of medicine and surgery, natural and mathematical science, moral, speculative, and political philosophy, in the fifteenth century which in many cases force us to modify old conceptions of the Renaissance as the period of the birth of modern thought after the Middle Ages. Professor Thorndike believes, however, that we must continue to eschew generalizations about the period until we have more information about its ideas and institutions. Consequently, he has contented himself in this volume with the examination in minute detail of a few manuscripts of the Renaissance with a view to checking the validity of time-honored generalizations about the period. Thus, in the preface he states his thesis as follows:

It is hardly possible as yet to draw a general picture of fifteenth century thought and science, although one might think so from the sweeping generalizations which have long been bandied about with reference to the decline of scholasticism, the so-called Renaissance, and the pre-Reformation period. One result of the special studies that follow should be to suggest that such generalizations have been to large extent unwarranted. Resting primarily upon the humanistic bias which has prevailed ever since the fifteenth century . . . these generalizations must give way as soon as the period is scrutinized from the neutral ground of the history of science and in relation to the medieval centuries immediately antecedent. But in order to develop such neglected aspects, detailed investigation is required.

There is, nevertheless, one generalization which, although never completely explicit, is the impression which the reader finds clearest as he closes the book. It may be summed up paradoxically by saying that Professor Thorndike finds neither the Middle Ages so

"medieval" nor the Renaissance so "modern" as has been thought until recently. Professor Thorndike rises indignantly time and again to castigate those who slander the "fair name" of the Middle Ages. Thus, against such statements as that of Faguet that "the time has not been more than that [300 years] during which men have known that the world is round, that it is small, and the sky infinite," Thorndike asserts that in the Middle Ages "every astronomical textbook or lecturer taught that the earth was a sphere." Furthermore, there is much evidence to show that geographical knowledge of Africa and Asia was increasing rapidly in the fourteenth century. Caravans crossed the Sahara, and Genoese vessels tried to circumnavigate Africa.

On the other hand, the Renaissance as the period of the "awakening of the human spirit" is called into question again and again. Thorndike finds that this period was much more barren of innovations than the twelfth and thirteenth centuries. Humanism did not check scholasticism, it merely changed the subject-matter. Instead of the status of universals, the humanists argued the relative merits of Hannibal and Scipio. Furthermore, there has been "a great deal of unsubstantiated claptrap about the lack of individuality in the Middle Ages and the development of individualism as a result of the Italian Renaissance." By a comparison of manuscripts and printed editions of Leonard of Bertipaglia's *Cirurgia*, Professor Thorndike shows how the editors and printers of the late fifteenth and early sixteenth centuries ironed out and suppressed a number of expressions of Leonard's individuality and personal scientific experience, so that the printed text fails to give us a correct and accurate idea of this early fifteenth-century work or of the condition of surgery at that time.

Not only does this volume of studies point the way to a revaluation of the achievements of the Middle Ages and Renaissance, but it examines critically and finds wanting some of the intellectual reputations of well-known men of the Renaissance. Perhaps the most interesting of these to students of philosophy is Nicholas of Cusa. He has been called the "first to announce fundamental principles of modern philosophy" and the "turning point in the history of astronomy." Thorndike's examination of the bases of this great reputation, especially the claims made for his astronomical theories, revealed a flyleaf note on a purchased astrological manuscript, a few vague references in a sermon, and in a mystical work *On Learned Ignorance*. The great claims of Heller for Cusa as an astronomer melt down to practically nothing as Thorndike turns up the sources. The names of Georg von Peurbach and Regiomontanus "have often been represented as reviving the study of mathematics after the dark

ages or as marking the transition from medieval to modern mathematics and astronomy." Professor Thorndike finds, however, that these men contributed little to the real advances of the period. They were inexact translators of Ptolemy's *Almagest* and makers of clumsy astronomical theories. Thorndike attributes their inordinate reputations to ignorance of the preceding medieval period, to their connection with influential cardinals like Cusa and Bessarion, and to Regiomontanus' rich patron, Bernhard Walther, to their alliance of mathematics with the humanistic movement and especially with the revival of Greek which made their work more acceptable to subsequent generations accustomed to measure everything to the hypothesis of an Italian Renaissance and revival of learning; and to their coming at just the right time to take advantage of the printing press and to be practically the first published contemporary mathematicians. Finally, since Peurbach and Regiomontanus were Austrian and German, their work has received rather undue emphasis from modern German historical scholarship.

The two main interests of Professor Thorndike in this volume, as we have indicated, are to show a continuity between the currents of thought of the Middle Ages and Renaissance (or even a falling off of genuine intellectual achievement between the Middle Ages and Renaissance), and to reëxamine some of the great reputations of this period. In the chapter on Niccolo da Foligno's treatises on ideas, Thorndike is interested not so much in the ideas presented as in the treatises as examples "of the scholastic Platonism or Platonic or pseudo-Platonic scholasticism of the Italy of the Quattrocento and so-called Renaissance." Niccolo, whose dates are 1402-1474, dedicated to Lorenzo de Medici a treatise reconciling the position of Aristotle on ideas with that of Plato. Another treatise similar to this exists in the form of a letter to a "Nicholaus compater." Professor Thorndike's essay deals chiefly with the comparison of the texts and attempts to determine whether the authorship was common or not. But here again the treatises indicate to Thorndike the superficiality of Renaissance learning, for neither treatise makes any direct reference to the works of Plato on ideas nor gives any indication that Niccolo had ever read Plato. It is perhaps fair to ask Professor Thorndike to what dialogues Niccolo should have referred for Plato's systematic presentation of his views on ideas.

Four short treatises on moral and philosophical questions written for persons of great distinction also interest Thorndike as representative of the thought, interests, and manners of the Renaissance. These works can not be dismissed as rubbish, Thorndike believes, for they were written by educated men and addressed to great princes. The first is Gregorius Crispus's *De Cultu humanitatis et honestatis libel-*

lus; the second, Bartholomew Facius's *De Humane vite felicitate dialogus*; the third, John Nesius's *De Moribus*; and the fourth, Oliver of Siena's *De Deo et rerum naturalium principiis et summa beatitudine*. Thorndike finds in these treatises almost no new ideas or advances over the thirteenth century. They show no pagan revival in morals or philosophy although there is a slight classical coloring in non-essentials. For extreme brevity, all-inclusiveness, and superficiality Oliver's treatise is without parallel in the Middle Ages.

Perhaps the most interesting of the philosophical works which Professor Thorndike epitomizes is the dialogue of Lippus Brandolini comparing a republic with a monarchy, *De Comparatione Reipublicae et Regni*. This treatise was begun in the winter of 1489-1490 at the court of King Matthias of Hungary and Bohemia. It was finished at Florence, however, due to the King's death and was dedicated to Lorenzo the Magnificent instead of Matthias. It discusses the relative merits of republican and monarchical forms of government neither by the scholastic method nor with a humanistic accumulation of classical allusions, but by a comparison of the constitution of Florence with that of Hungary. The treatise is especially interesting since, as it seems to favor monarchy, it may be taken as prophetic of the growing tide of monarchical absolutism in Europe. It antedates Machiavelli's *Prince* by a generation.

If one should venture any criticism at all of such a scholarly piece of work as this volume of studies, it would be that Professor Thorndike perhaps reads a little more out of the evidence than is justifiable when it is possible to make a point in favor of the Middle Ages or even of the Renaissance as against modern times. Thus, in a dialogue concerning the relative merits of law and medicine, the advocate of the law, Salutati, calls attention to the disagreeable nature of the doctor's task who must inspect and demonstrate the viscera of man through veins, arteries, muscles, and so on. From this passage Thorndike makes three inferences: first, dissection of the human body before Vesalius's time was frequent; second, either Salutati's sensitiveness to the sight of human viscera is somewhat overdrawn or physical injuries, weapon wounds, duels, street fights were probably less common then than we have been led to believe; and finally, either his inspection of urine and excrement is overdrawn or else people did not pour slops and pitch offal into the streets to the extent that has often been stated. To the first inference the objection might be raised that if dissection had been very frequent it would seem that many of Vesalius's more obvious discoveries (such as the correct number of bones in the sternum) would have been made. Dissection was probably not as frequent as Thorndike would

seem to imply, but more frequent than many older writers who made much of the ban of the Church on human dissection would like to have us believe. Demonstrations on the human body were often made before students by a menial who followed the directions of a lecturer who read from a textbook such as that of Mondino written in the fourteenth century. But this is quite a different thing from dissection for the sake of discovering the exact nature of the human body. As for the other inferences, it would seem that Professor Thorndike may have forgotten that this passage occurs in a controversial dialogue between exponents of the supremacy of the laws and those who sponsor the supremacy of medicine. Naturally, a person arguing for the law would make the most of what must seem to practically every layman to be an unpleasant aspect of the physician's life.

But Professor Thorndike's essential emphasis on the continuity between medieval and modern times is all to the good. It is becoming increasingly clearer that no longer can any man or group of men be deified as the sole founders of any science or the pivotal turning-points of epochs, for modern research has uncovered men in practically every science who antedate the "founders" sometimes by centuries and who anticipate important parts or all of their discoveries. Professor Thorndike's volume does some notable spadework in leveling off the mountainous reputations of the Renaissance and of some of its products by a searching examination of typical documents.

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David Hume. J. Y. T. GREIG. New York: Oxford University Press. 1931. Pp. 436.

Mr. Greig's biography of David Hume is the first full and important account of Hume's life since the two-volume work by J. H. Burton in 1846. There has been no need to retell the story often; for little new material has come to light, and Burton did a thorough job. Mr. Greig's book is none the less welcome. His narrative is in a lively and attractive style; though he at times imposes on his readers by needlessly long descriptions of scenery Hume may have seen and cities where Hume lived, he has skilfully utilized his wide knowledge of eighteenth-century history and literature to give an effective picture of the *milieu* in which Hume's career occurred. Burton's two volumes will continue to be consulted by all students; but Mr. Greig's book is more likely to be read. Mr. Greig has put us still further in his debt by bringing out (shortly after his biography of Hume appeared) two volumes of *The Letters of David*

Hume. These two volumes will probably prove the definitive edition of Hume's correspondence; they are accompanied by footnotes that contain just the requisite explanations; they give every letter complete where sometimes the letters had been previously printed in part only; and they add some three or four dozen new letters to what other collections contained. Mr. Greig's biography of Hume, though published just prior to the *Letters*, is probably a result of Mr. Greig's work on his major task of editing the correspondence; he writes as one so enamored of his hero that he could not restrain himself from telling the story of Hume's career over again. His narrative is freed of the bulk of the letters (though, of course, crucial passages are quoted to substantiate decision on moot points); and this adds to the readability of the narrative. Mr. Greig himself has obviously derived much enjoyment from many curious and amusing and instructive phases of Hume's career; and his biography will enable many readers to share his enjoyment.

It would not be profitable to list here the points of fact on which Mr. Greig differs with Burton or the points of interpretation of Hume's writings on which he differs with other competent critics of Hume (as in his rejection of Professor A. E. Taylor's slurring comments on Hume's essay *Of Miracles*). One matter, however, may be summarized briefly, namely, Hume's own religious belief. Documents do not exist to enable us to decide this matter with finality. But Mr. Greig makes out a very plausible case. Hume, says Mr. Greig, held to belief in "God as Creative Intelligence—though not, perhaps, as Perfect Goodness"; he sanctioned a theism of "the harmless, philosophic, rather watery kind." Mr. Greig takes the opening pages of *The Natural History of Religion* and the closing sentiments of the *Dialogues concerning Natural Religion* at their face value, as genuine and not as ironic. He interprets the argument of the *Dialogues* as intended to culminate in the reconciliation of Philo and Cleanthes, though recognizing that this reconciliation "carries no conviction" and is dramatically weak. Hume, he says, "failed to realize the strength and significance of the Philoesque elements in his own thought." But while it is true that Philo "proved too strong for his creator," it does not follow, so Mr. Greig contends, that Hume himself meant in the *Dialogues* to imply an atheism that he did not dare openly to avow. Hume's real animus was against the Calvinistic clergy whose theological teachings in Scotland in the first half of the eighteenth century were "mean, brutal, and intolerably legalistic," and whose control over the life of their parishes was as dismal as it was exacting. His scorn of Calvinistic tenets and other religious positions that seemed to him superstitious was so great that he could not resist opportunities to attack them in his

writings and in his conversation. But he still himself believed, as the first page of *The Natural History of Religion* puts it, that "the whole frame of nature bespeaks an intelligent author." And Mr. Greig concludes that Hume really continued to hold this vague theism even when his analysis of causality and general scepticism made such a position unwarranted. In other words, the atheism that seems logically implied by much that Hume wrote was not Hume's own position.

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JOURNALS AND NEW BOOKS

MIND. Vol. XLII, No. 165. The Rightness of Goodness (I): *P. Leon*. The Subject of All Judgments: *D. W. Gotshalk*. Deductive Systems and the Absoluteness of Logic: *Everett J. Nelson*. Logical Constructions (IV): *John Wisdom*.

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 32 Année, No. 1. Thèse: Le Devoir comme Principe de toute Valeur: *R. Le Senne*. Discussion: *C. Bouglé*, *A. Lalande*, *R. Lenoir*, *X. Léon*, *D. Parodi*, *L. Weber*. Appendice: Extrait d'une lettre de *Maurice Blondel*. Extrait d'une lettre de *Emmanuel Leroux*.

ARCHIVIO DI FILOSOFIA. Anno II, Fasc. III. Chiesa e Stato (continuazione e fine): *B. Varisco*. Il problema dell'errore nella filosofia dell'immanenza: *A. Levi*. Ricerca intorno ai limiti della conoscenza per concetto: *R. Miceli*. Il problema filosofico dell'amore nell'opera di L. Ebreo: *G. Fontanesi*. Il concetto dell'idolatria: *E. Nobile*. In morte di L. Laberthonnière: *E. Castelli*.

LOGOS. Anno XV, Fasc. 4. L'esperimento storico della verità religiosa: *A. Aliotta*. Fisica e metafisica: *A. Sellerio*. Francesco Fiorentino: *D. Bosurgi*. A proposito di Ockham: *N. Abbagnano*. Il Cristianesimo nel pensiero di Onofrio Trippodo: *V. Fazio-Allmayer*.

Humphrey, George: *The Nature of Learning. In Relation to the Living System.* (International Library of Psychology, Philosophy, and Scientific Method.) New York: Harcourt, Brace & Co. London: Kegan Paul, Trench, Trubner & Co., Ltd. 1933. vii + 296 pp. \$3.75.

Lehmann, Gerhard: *Die Ontologie der Gegenwart in Ihren Grundgestalten.* Halle (Saale): Max Niemeyer. 1933. 42 pp. 1.80 M.

Mukerji, Khan Gopal: *Daily Meditation or the Practice of Repose.* New York: E. P. Dutton & Co. 1933. 40 pp. 90¢.

Ortega y Gasset, José: *The Modern Theme.* New York: W. W. Norton, Inc. 1933. 152 pp. \$2.00.

Scott, Howard, and others: *Introduction to Technocracy*. New York: John Day Co., Inc. 1933. 61 pp. 90¢.

Stern, Alfred: *Die philosophischen Grundlagen von Wahrheit Wirklichkeit Wert*. München: Ernst Reinhardt. 1932. 432 s. 10 M.

Streeter, Burnett Hillman: *The Buddha and the Christ. An Exploration of the Meaning of the Universe and of the Purpose of Human Life*. (The Bampton Lectures for 1932.) New York: Macmillan Co. 1933. xiii + 336 pp. \$2.00.

Taba, Hilda: *The Dynamics of Education*. (International Library of Psychology, Philosophy, and Scientific Method.) New York: Harcourt Brace & Co. London: Kegan Paul, Trench, Trubner & Co., Ltd. 1933. xvi + 278 pp. \$3.00.

von Mutius, Gerhard: *Zur Mythologie der Gegenwart. Gedanken über Wesen und Zusammenhang der Kulturbestrebungen*. München: Ernst Reinhardt. 1932. 128 s. 2.80 M.

Vialle, Louis: *Détresses de Nietzsche*. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1932. viii + 154 pp. 20 fr.

Vialle, Louis: *Le Désir du Néant. Contribution à la Psychologie du Divertissement*. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. 745 pp. 60 fr.

Wiesengrund-Adorno, Theodor: *Kierkegaard. Konstruktion des Ästhetischen*. (Beiträge zur Philosophie und ihrer Geschichte. 2) Tübingen: J. C. B. Mohr (Paul Siebeck). 1933. vii + 165 s. 9.60 M.

Woods, Elizabeth Robinson: *Music and Meaning*. Cambridge: Harvard University Press. 1932. ix + 101 pp. \$2.00.

NOTES AND NEWS

Harvard University Press has published an attractive booklet on *Berkeley's American Sojourn* by Professor Benjamin Rand. It brings together all the historical data concerning Berkeley's visit to America and his educational project in Bermuda. Of special interest are the gleanings from the correspondence between Berkeley and Henry Newman, secretary of the Society of the Propagation of Christian Knowledge.

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXIX. No. 23. November 10, 1932.

On Having Ideas in the Head. DONALD C. WILLIAMS.
Measurement Relationship and Correlation. PAUL HORST.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 24. November 24, 1932.

The Above-and-Below Notion. GEORGE R. MONTGOMERY.
Professor Driesch on Philosophical Methods of Procedure.
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NON-BEING¹

"IT is not possible for what is nothing to be. For thou canst not know what is not, nor utter it. What is, is uncreated and indestructible; nor was it ever, nor will it ever be; for now it is, all at once, a continuous one; moreover it is immovable. For what kind of origin for it wilt thou look for? I shall not let thee say nor think that it came from what is not; for it can neither be thought nor uttered that anything is not. How can what is be going to be in the future? If it came into being, it is not; nor is it if it is going to be in the future. Since coming into being and passing away have been driven afar, it (being) is the same, and it rests in the self-same place, abiding in itself. Wherefore it is wholly continuous, for what is, is in contact with what is." (From the fragments of Parmenides.)

I pick up this sheet before me and state "the paper is not black"; have I perceived the non-blackness of the paper? Or again, I put my hand in my pocket and report "there is no money there"; have I observed the absence of money from my pocket? To these questions, the man in the street—that is to say, the intelligent layman—would reply unhesitatingly, no. What I have perceived is that the paper is white. An absence can not be perceived because an absence is nothing; it is not there to be perceived. Experience is always of something present; as for the absence of money from my pocket, what I really perceived was perhaps the presence of a handkerchief, or some similar object. Not only empiricism, but rationalism too, seems to reject non-being. The question before us is wider than that of how we come to know a negative truth; it is one of being; whether non-being can be said to be, objectively, at all. Surely that is a contradiction. Non-being is non-being and therefore can not be. And as Parmenides points out, nothing can neither be thought nor uttered. Thought is of something; to think of nothing is not to think.

Shall we, then, abandon the idea of non-being? But without it, the worlds both of experience and of discourse come to nothing: The philosophy of Parmenides is a case in point; its premise is the denial

¹ Portions of this essay were read at the meeting of the Eastern Division of the American Philosophical Association, Dec. 29, 1932, at Bryn Mawr, Pa.

of non-being and its conclusion the assertion that reality is timeless, changeless, one. There is no non-being; therefore there is no becoming, for becoming is a passage from non-being to being. There is no non-being; therefore there is no motion, for motion takes place in empty space, i.e., space from which being is absent. There is no future, for the future is what is not; likewise, there is no past. There are no individuals distinct from one another, because diversity is otherness, a form of non-being. Clearly the world of experience as a plurality of concrete things in space and time, is constituted through non-being. Moreover, thought requires non-being. Thought is explanation; but to explain what makes an object exist, to assign a cause for the coming-to-be of a thing, is to contrast it with its absence; it is to ask how it passed from a state of non-being to one of being. Thought operates through contrast; to conceive of any essence, such as man, is to think of it as in opposition to not-man. A reality like that of Parmenides, in which everything is reduced to unity, is simply unthinkable.

Thus non-being, having been expelled from the door, comes in through the window. It is true that non-being is not given to mind; and all reasoning which restricts itself to the criterion of givenness is bound to deny non-being. However, non-being must be accepted as a valid conception because it is entailed by whatever is given—to sense or to thought. Being is in the foreground, non-being in the background; it belongs to the beyondness of the given. To drag non-being into the field of presentation is to destroy its nature and turn it into being; since, to designate, is to point to an object. Non-being is grasped not in experience but by reflection. Like the obverse side of the moon, non-being is forever closed to apprehension; none the less, it enters into discourse as something which is required by whatever is within discourse.

The contention of this paper is that non-being must be admitted together with being as a necessary constituent in the world of reason and of experience. Our problem is metaphysical, not logical. A logician is not concerned with the actual world; if, starting with certain primitive notions, he is able to define non-being in terms of them, it is legitimate for him to do so. But our own interest is objective—we seek to describe what actually obtains in the world; we ask ourselves, is there or is there not such a thing in reality which answers to the conception of non-being. One set of arguments in favor of our contention is the failure of the various attempts to dispose of non-being. Let us return to our original examples. How do I know that the paper is not black? Because I perceive it to be white. But how does that justify me in asserting the negative conclusion? Because I know that what is white is not black. Yet this

is a negative proposition, asserting a negative fact. Or, I report that there is no money in my pocket because I fail to find it there. But my failure is itself a negative fact; it is the absence of a certain experience.

Nor does the attempt to explain the absence of a thing by the presence of another succeed. The fact that I find a handkerchief in my pocket is no ground for inferring that there is no money in my pocket. Absence can not be reduced to presence; it must be accepted as an ultimate fact. I am looking for my friend Mr. Smith; I go into the living room and I observe that he is not there. What is the basis of this negative knowledge? I notice that Mrs. Smith and Miss Smith are there, but surely that is no ground for inferring that Mr. Smith is not there (we exclude the possibility that Mr. Smith is on bad terms with his family). My justification is my knowledge that Mrs. and Miss Smith are all the people there are in the room; and this proposition is negative—"nobody else is in the room but Mrs. and Miss Smith." We can not elicit the negative situation from any other; we must start with it.

(a) Then there is the subjectivistic view of negation; according to this, negation is only a projection into the real world of the subjective attitude of denial. Thus, when I assert "they shall not pass" I am denying that "they shall pass." In the objective world there are only positive facts, to be validly asserted or denied by positive propositions. And the truth of a negative proposition consists in the fact that a positive proposition is validly rejected. (Perhaps we should speak of neutral facts and propositions.)

In reply, we might point out (1) that the subjectivist theory fails to eliminate the negative element from the objective situation. On what ground is denial of a proposition valid other than that the proposition is inconsistent with fact? And is not the relation of inconsistency a negative fact? (2) It is impossible to establish a strict correspondence between the cognitive attitude and the quality of the proposition; I may affirm a negative proposition, or deny a positive one, or again disbelieve a negative proposition such as "there is no life after death." (3) The attitude of denial (or of affirmation for that matter) may be absent altogether, and yet the proposition be significant. The proposition has a meaning as such; thus, I may contemplate the negative proposition "parallels do not meet" without assuming any attitude toward it of acceptance or rejection; yet the proposition has meaning in its character as negative. In brief, a negative proposition is an object of discourse; it is not a construct of the understanding but a datum for it.

(b) In an article by the present writer published in *Mind*, Volume XXVI, No. 102, a theory of negative propositions as descrip-

tions of positive propositions was expounded. A negative proposition not- p was defined as an elliptical reference to a positive proposition and as really of the form "a certain proposition q is true which is contrary to p ," or, "an opposite of p is true." Thus, when Mr. Coolidge, on being asked his intentions concerning the presidency of the United States answered, "I do not choose to run," his statement, when corrected, should read "the truth is inconsistent with the proposition, 'I choose to run.'" By such a construction of negative propositions, all reference to negative fact is eliminated, and the negative proposition is defined as an incomplete symbol, which when completed, becomes the description of a positive situation.

This theory, too, must be rejected because, while striving to do away with the idea of negative fact, it uses the very idea in the process. According to the theory, a proposition such as "the mail did not come today" is really a description of a positive situation inconsistent with the mail's having already arrived. Yet the inconsistency between the positive situation and the proposition "the mail has arrived today" is itself a negative fact. "That q is incompatible with p " if true, describes a negative truth. We replace a simpler type of negative fact, by one of a higher type, which expresses a relation among propositions; and we have gained nothing. If it is possible to have relational negation, it seems possible that there be also negation which may be expressed by an atomic proposition. In trying to decide what to do with negation, we must go back to first principles. Negation is one of the ultimates; any list of final metaphysical categories would have to include non-being as a member; consider, for instance, the scheme of categories presented by Plato in the *Sophist*. Non-being is part of discourse equally with being; it is there and must be accepted.

The standpoint which defines negation through affirmation is wrong because affirmation is constituted through negation, and being through non-being. It is not that we begin with a positive situation and then proceed to infer the absence of something else; the positive situation is what it is, through the fact that it is not something else. Take our previous example, that the paper is not black. The view that we infer this from the fact that it is white, is naïve; to be white is not to be black, or yellow, etc.; "white" as a concept, has significance only as contrasted with other concepts; "white" as an essence has being in so far as it is incompatible with, or diverse from, other essences. Thus, we do not have a transition from positive knowledge to negative knowledge, or from positive fact to negative fact; abstracted from its negative side, the positive

situation does not begin to be. To be or not to be—that is not the question; in fact, that is no question at all. The concrete fact is one of being and non-being indissolubly connected; “to be and not to be” is the unit of discourse and of reality. This view is admirably summed up in Spinoza’s phrase: determination is negation. To be α is not to be β ; exclusion, contrast, otherness—these are of the very essence of being. In stating that affirmation is constituted through negation, we must not be taken to mean that negation is prior to affirmation. The negative situation in its turn, is constituted by an affirmative one; there is no pure negation any more than there is affirmation *simpliciter*. Something is excluded because—or rather in so far as—something is included. The positive and negative characters are not so much facts, as they are correlative poles in every fact. A thing is what it is, through whatever it is not; and it is not, through whatever it is what it is.

To substantiate the above dogmatic statements, we will now proceed to illustrations. We might divide the world into particulars, classes, essences, and facts. (1) Particulars exist through otherness; self-identity entails diversity; to be “this” is not to be “that,” or rather not to be some other particular. To identify is to distinguish, it is to isolate from a world. To posit an individual is to posit a world, a plurality of individuals constituting the environment for the given individual, and with which the latter is contrasted. We have the individual *contra mundum*. A dispute has been carried on sometimes as to which of the two is prior: identity or diversity. But the dispute is futile; the two are coördinate and interdependent. To point is to point to something and away from something. Thus, exclusion is a condition of individuation, under the guise of otherness, or the Platonic *ἑτερον*.

(2) Classes. Given any class of objects φ , we have the class of objects not- φ . Not- φ is given along with φ , and can not be defined in terms of φ ; it is ultimate. To posit the class of objects “men” is to posit the class of objects which are not men. In short, given any group, there is inevitably the group of things outside the group.

(3) Essences. Within the realm of forms, we have the obvious relation of incompatibility or contrariety; sweetness is the opposite of bitterness, roundness of squareness; and this relation is important in the understanding and the constitution of each form. But contrariety is only a special case; the negative relation is broader in scope. We have the fact that every essence is a specific essence; it has an individuality and therefore otherness; thus, sweetness is other than roundness; animality other than being a table. We discriminate among essences, as well as among things. Of course, there is a hierarchy of forms, and some are more inclusive than others;

but there can be no single essence which includes all essences, since to be an essence, is to be just this essence and not that.

(4) So far, negation has appeared as the relation of otherness among things, whether particulars, or classes, or forms. We now come to negation in another aspect, namely, as non-being which is contrasted with being. In this aspect, it is not a relation among beings, but absolute non-being. We are dealing now with facts. Let us consider facts about John. John is twelve years old; in other words, it is not true that he is of any other age. John is on the playground; that means he is not at home, and more generally, he is not at any place other than the playground. Thus, for John to have a certain character, is not to have other characters. The sense in which every object occupies a determinate position in time and in space and no other, arises from the fact that exclusion is part of spatio-temporal being. This is an apple tree; and it is such in so far as it is not a pear tree—in so far as, being an apple tree, it is not anything else. Again we must note that what is excluded is broader than what is required by contrariety. We have the fact that *A* is round and, so far forth, is not square. But the concrete fact is not limited to this instance of exclusion. "This man is a doctor," means that he is not anything else; but there is nothing to which being a doctor is contrary; he could be both a doctor and a lawyer. That is quite true. Let us go on to summarize his qualities; they may in fact be infinite; nevertheless, an infinity of qualities is excluded from his nature. Let us express his nature by a concept ϕ ; then this concept is definite and therefore excludes everything else. It is the principle that somewhere there is, there must be, a stop. John, as an actual thing, must be limited both in extent and in essence; thus, actuality is necessarily atomic. To characterize is to leave out; existence is both commission and omission. There is, as it were, the principle of fatigue in things; something is left out not because it is incompatible with what is taken in, but because actuality is definite. Thus far and no farther, is the rule of being and the law of death in life. Hence, there is always a "more," always a remainder. The structure of the individual—as constituted by the facts about him—can best be expressed through the figure of a circle; there is so much inside and the rest is outside. Thus, no matter how complete the individual, he is incomplete, on account of the very structure of being.

In short, we have the being of certain forms within John, and the non-being of certain (other) forms within John. Here, non-being is absolute; it is not a relation among beings; there is the sheer absence, as there is the sheer presence. This essay, in a sense, is a footnote to Plato's *Sophist*; yet, we must part company with him most explicitly concerning the definition of non-being. He says:

"When we speak of non-being we speak not of something opposed to being, but only different" (p. 257); further, he says that non-being is "the contrast of being with being" (p. 257). Plato restricts non-being to otherness, and therefore is enabled to define it as a relation among beings. Though otherness is entailed in negation, it is not sufficient to account for the nature of the negative fact. "Being a doctor" and "being a lawyer" are mutually diverse; and this is the separation of the essences. But in the world of actuality we have the further fact, that the one is realized (cf. John is a doctor) and the other is not; and this is not given in the bare statement of the diversity among essences. We have the non-realization of the one essence and the realization of the other; we have true non-being as contrasted with being.

* Let us say, for example, that a, b, c are all the objects there are in the universe. This is both a positive and a negative proposition; on the positive side we have that a, b, c exist; on the negative, that nothing else exists. Now, it is impossible to express the fact that nothing else exists as a function of the being of a, b, c , or of their mutual diversities. The fact that, so to speak, God stopped after he created a, b, c , is a genuinely negative fact, additional to the fact that he created a, b, c . All knowledge and all actuality are of the form: such-and-such is all there is in the given case, and nothing else is. We must not be misunderstood. By sheer or absolute non-being we do not mean non-being as such; we mean the non-being of specific properties X or Y . Again, we do not mean to imply that non-being can exist by itself. The unit of fact is non-being with being. But we do insist that in the unit of fact, non-being is a necessary element, correlative to being; that it can not be reduced to a mere relation among beings.

We have here the principle of limitation expounded by Plato in the *Philebus*; in fact, to go further back, we have Anaximander's doctrine that coming into being consists in the separation of things in the infinite. The infinite is the indeterminate, that in which all things are mixed, wherein the lion lies with the lamb, and white merges with black. This is the flux of sensation, and it is nothing. Actuality comes about through separation, through sharpness of outline, through the establishment of compartments; correspondingly, knowledge consists of clear and distinct ideas. God, in creating the world, issued one command only: let there be exclusion.

(1) The form of a fact, we will say, may be expressed in the sentence: " X is φ " with ' X is not anything else,' or, " (φX) is-with-(not- φX is not)." The preceding discussion has already shown that in the fact so construed, there is negation in a double sense. We

have first the reference to "anything else," or to not- φ ; and secondly we have the denial that not- φ applies to X . What the relation of these two instances of negation is to one another, we will discuss at a later stage of this essay.

(2) It has been maintained that the ultimate subject of all judgment is reality. If by reality is meant being (as contrasted with non-being) then the statement is wrong. Every judgment refers both to being and non-being.

(3) The negative pole of a fact is determinate. The absence is a definite absence; for example, the absence of not- φ . We can discriminate among non-beings. Negative classes are particular classes. We have the absence of sorrow or the absence of joy; we may have the absence of not-sorrow or the absence of not-joy. Thus, one absence is other than another. The function φ is like a radius defining a circle, and "what is outside the circle" is a definite term. Yet, in another sense, the negative pole is indefinite; φ is a name, but not- φ is a descriptive term for the forms to which it refers.

Let us enumerate the conditions under which exclusion takes place in the actual world.

(I) This herb is bitter; this herb is not sweet. Such an exclusion is determined by a formal opposition among essences: what is bitter is not sweet. Yet this is a very small part of exclusion. (II) Exclusion arises from the general principle of exclusion, namely, that an object, to be actual, must have boundaries. What the object excludes can not be deduced from any specific principle. It is a factual, contingent limitation, except in so far as it is subject to the universal condition that there must be limitation. So-and-so has visited Venice, Munich, Moscow, and other cities; he has lived fifty, sixty, seventy years; he knows Sanskrit, philosophy, modern painting, biology, and other fields; but he stops at some point, whether it be in respect to traveling, or of the duration of his life, or of the extent of his capacity. (III) In the view that actuality is achieved through limitation, there lurks a paradox. To be more, one must be less. The ideal seems to be fullness, indefinite progress and expansion; and limitation seems equivalent with frustration. But if limitation is frustration, how can it be a condition of actuality? Plato, in his picture of the democratic man, vividly shows that mere multiplicity of interests is distraction; the democratic man is everything to everybody, and comes to nothing. Achievement presupposes concentration; mere expansion results in loss of center and of integration. I should like to suggest—and here I go beyond the strictly analytical intent of this paper—that limitation is an expression, partly, of a principle of value, or of perfection, operating in actuality. Actuality is limited because thereby it realizes a certain intensity of con-

centration, and therefore, value. Thus we have two kinds of limitation; the one is external, and if you like, arbitrary; this is mere exclusion through what I have called the principle of fatigue; the other is internal, in the sense that the achievement of value requires the exclusion of a definite range of forms. Such a rule is easily seen to be a norm in conduct (as when we speak disparagingly of a Jack-of-all trades); also in art, where intensity of effect demands the exclusion of irrelevancies and a strict economy of means. In the realm of cognition, too, we have the principle that a theory which explains everything, explains nothing. Thus, in the various human attitudes, the principle of value, conceived as one of concentration with consequent intensity and depth, is recognized as a valid norm. Much more speculative is the doctrine that the principle of perfection is not only normative but a metaphysical law conditioning the becoming of things and their passing. According to this, limitation is the other side of concentration. The demand is for wealth of content without loss of intensity; there is the demand for fullness: that is, inclusion; and there is the demand for concentration: that is, exclusion. Consequently, the world breaks up into units, particulars, species, in each of which the maximum of richness is gradually achieved, subject to the condition that forcefulness and definiteness are preserved. We have apple trees, and pear trees, and peach trees; we have this and that and the other distinct species of animal, because only by a breaking up of the total wealth of possibility, by its separation into distinct areas, and its integration according to the rules of contrast, is esthetic value achieved. Concentration must not be mistaken for narrowness; there is the demand for fullness as well as for intensity. Nevertheless there is a limit to wealth of content, such that if it be transcended intensity is lost. Consequently, the nature of things is circumscribed. There is a variety of possible schemata or patterns, in which maximum of wealth and maximum of intensity are combined; and it is according to these that the world of actual things is constructed. These patterns are like quanta; essences can be actualized within particular moulds only. The ingeniousness and evolutionary character of nature is manifested in its tireless, continuous, tendency to devise new schemata, new patterns of integration of essence, wherein the area of inclusiveness is increased, whilst concentration is preserved. An individual of a given nature is restricted to the limits of his pattern; and if he expands beyond it, he disintegrates. Enlargement can come only by abrupt transitions; it is made possible by means of a new schema or mould, defined by a new formula of inclusiveness and exclusiveness. These schemata must be indefinite in number; consequently there is no limit to the evolutionary possibilities of nature. What we call types of things, or species, are selections among such schemata.

We have begun by defining actuality through exclusion, yet the conception of inclusion has steadily made claims upon our attention; we must take up this conception now and endeavor to clarify it. An entity is a fusion of forms or essences; roundness, brownness, hardness, etc., enter into the formation of this individual table. Thus, an entity is not a mathematical point; it is an area, a multiplicity of forms. As Plato points out in the *Sophist*, unless there be participation (*κοινωνία*) of forms, discourse is impossible; even the simplest type of discourse, such as " φ exists," involves a relationship of forms, cf. between φ and existence. We can not have predication without participation, i.e., of a quality with a particular. To be, then, is to be a relationship. In fact, an entity is a wealth of forms in a systematic unity; an entity is not an entity except in so far as it is a whole of parts. This is the principle of the divisibility of matter. Thus, we have two factors operating in the determination of an individual: a plurality of forms, and their mutual relation. An individual is a system.

It will have been noticed that actuality, so conceived, entails a previous diversification of forms. Predication, propositional assertion, is a relationship among forms which are other to one another. But if they are *ἑτερα*, how can they participate in one another? To repeat Plato's question—is not this a contradiction? People have been apt to regard negation as the situation *par excellence* which calls for explanation; yet affirmation is much more of a problem. For, in exclusion, what is excluded is granted as diverse, and that seems natural; but participation means some sort of unification of diverse elements. For example, in the fact that "the captain is sick," "being a captain" participates in "sickness," and yet a captain can be only a captain, and sickness, sickness. One way out would be to say that we are affirming both essences as true of an individual, not of one another. There is an individual of whom we predicate both captaincy and sickness. The trouble with this view is that it assumes the reality of an individual apart from essences (or the truths about him); and this is quite an assumption. Moreover, whether there be an individual or not, the relation of participation is an immediate one among the forms themselves. We are driven to define it as some sort of relation which is neither diversity nor identity. We will characterize it as togetherness; we will say that actuality is a togetherness of forms (as well as an exclusion of them). Togetherness is not incompatible with otherness; it is precisely the togetherness of elements which are diverse. We must have contrast among elements before we can speak of them as being together. And so we are able to distinguish togetherness from the mixture of forms in the infinite. In the latter, there is no togetherness

because there is no otherness; in fact, we can not even speak of mixture. It is a state of pure indetermination, in which there is neither separation nor fusion. Togetherness, however, is possible, through the fact that there is separateness among the elements.

An individual is constituted through the togetherness of forms; hence, to be an individual is to be an organism. The relation between the essences in any given individual is an internal relation because it is one which brings about a new being. (1) The essences which are comprehended within the area of any actual entity are infinite in number, or—should we say—analysis can never exhaust them. I see a fracas in the street; I come back home and report it to the family. The questions they can put to me are endless, and I can go on endlessly answering, even though I was out there only a minute. Nevertheless, the totality of essences is capable of being expressed by a unified formula, which is the *nature* of the entity in question. (2) The essences which constitute the actual entity are not general but specific—this specific shade of brown, this particular shape or hardness. Concepts do not convey specific essences. Take, for example, color. We do not find color in experience; we do not perceive that this object is colored; we perceive that it is blue or green. But even blue, as a concept, is an abstraction, and does not convey the particular blue which I perceive when I look at the expanse of sea before me. There is a texture to the empirical blue which escapes the concept; it is the texture which makes it concrete. It has often been assumed that what is specific must be an individual, and that essences are necessarily universal. But this is not true. We have specific concrete essences, and these are not individuals, but characters of individuals. Further, the total nature of the individual is specific and unique. Thus, we have specific essences and specific total natures. What are designated as facts, are the relations which subsist among the various constituent elements of the individual. (But we must add that facts are also the instances of exclusions of essences from the individual.)

There is a type of togetherness among essences which does not issue into an actual entity but into a general character. For example, animality and rationality, through their mutual togetherness, constitute the general essence "man"; contrast "man" with Socrates, who is, also, a systematic interrelation of forms. There is thus the coexistence of essences which constitutes a particular actual thing, and there is the relationship which constitutes a general character, a species, or a law. The essences which enter into the formation of the latter are finite in number; they are not inexhaustible in analysis, and thus stand in contrast with the nature of the individual. We might thus say that the integration of forms proceeds in two

stages; there is first the emergence of general natures, and there is the further particularization of them into individuals. The former stand in relation to the latter as laws; they determine them, but not wholly.

We are now ready to connect the above discussion with the topic of negation. Given any actuality, we have both the being of togetherness of forms, and the non-being of such togetherness; the former is as essential as the latter. We must amend our version of the command of the Creator to read: Let there be inclusion with exclusion. Existence is not defined through the separation of entities in the infinite, nor through their togetherness, as such; it results from the application of what the Greeks called Measure, such that elements are arranged in a systematic order, whether of togetherness or of its absence. Thus, the principle of actuality is Limit or Measure conceived as a rule which determines not only which forms are left out but also which forms are selected. Laws of science are instances of the operation of the Limit upon the Unlimited; and to assume the principle of induction is to assume just this principle of the Limit or order—of systematic inclusion-exclusion—as the constitutive principle of actual things. If we may return to our figure of the circle, there is the polarity between what is within and what is without; there is the pressure of what is without upon what is within, and there is the resistance which the latter offers to the former. What is included in the circle is an infinity of essences, and what is excluded is an infinity too, but one of a higher order. To quote Professor W. P. Montague, being is a tiny island in an ocean of non-being. It would be absurd to speak of a ratio between the within and the without the circle, seeing that both are infinite quantities. Yet there is a stress, and an esthetic balance through contrast between these two infinite classes of forms.

In our account so far, negation has appeared under three guises: otherness, contrast, and non-being. What is the relation of these to one another? Are they the same or different? They do bear a likeness to one another, and yet they are not reducible, any two of them, to the third. Take otherness which presumably is the most fundamental; otherness defines individuals and essences; there is the further fact that in any negative assertion, otherness is entailed; negation is the non-being of what is *other* than ϕ (cf. "this is an apple tree, and it is not anything *else*"). Moreover, being is other than non-being. But it is also true that otherness entails non-being; that this is other than that is the non-being of identity between this and that. "This is this" or " A is A " is an assertion of identity, and to that extent the being of identity. Being is the final residuum

in all discourse; to assert the validity of non-being is to assert the being of non-being.

Consider contrast. Contrast seems to be a special case of otherness, and yet contrast reappears as a defining notion of that by which it is defined. There is the contrast between identity and diversity; between ϕ and not- ϕ ; between being and non-being; and this contrast is essential to the being of each of these categories. It is the ultimate contrast between truth and falsehood. Yet non-being, which entails contrast, also is presupposed by it; thus contrast is the non-being of a certain relation between elements and the being of another. All three—diversity, polarity, non-being—must be taken as aspects of some more ultimate, yet unformulated relation, and all three participate in one another.

The fact is that as soon as we enter into the realm of the final categories of reality, we are unable to avoid contradiction; categories are distinct, and they also enter into one another. As Plato shows in the *Sophist*, being is other than the same (identity) and is the same, too. Participation, from one point of view, is one of the various categories, diverse from and coördinate with them; but from another, participation pervades the categories. For example, being participates in the other categories such as unity and identity; in this sense, participation seems to be more fundamental than these categories; and yet, participation is an instance of being. Participation as the togetherness of forms in an individual, is contrasted with exclusion; yet, in so far as every actual object is "inclusion-with-exclusion," it is true to say that togetherness is together with non-togetherness. In the sphere of the categories, not only the law of contradiction but the theory of types, as well, is violated. The principle of perfection is the source of definiteness in actuality; but the principle of perfection is, itself, a definite principle. Being and non-being are polar opposites; that is, being is the non-being of non-being. Categories are diverse, and they also interpenetrate. Also, otherness is other than the other categories. In dealing with principles which lie back of the very laws of discourse and of reality, we can not be surprised if we find that these principles are not subject to those laws.

A similar and notable instance of the same characteristic appears in the analysis of non-being. The very conception of a negative fact is a paradox; if negation is a fact, then it is a presence, not genuinely an absence. The contradiction which seems to lurk in the doctrine of the being of non-being need not frighten us; it is the general contradiction—if contradiction it be—which pervades the realm of the final categories. The same truth can be approached from another path, as follows: we have the infinite—but non-vicious—regress of non-being. Actuality is being with non-being, but

non-being is a form of being. Indeed, the whole concrete entity, defined as being with non-being, is itself a being. True enough. But to grant this is to posit non-being at a further remove, with which the stated being is contrasted, and which it excludes. Non-being turns into being, which itself is contrasted with more non-being, and so forth.

Creation is conceived by Leibniz as a passage from unrealized to realized possibility. But if our doctrine is correct, non-realization of possibility is an integral factor in creation, and is not superseded by it. That there should be unrealized possibilities is necessary to the being of realized possibilities. Hence the condition of mere possibility is not antecedent to creation but coincident with it; that this or that possibility should not be actual is a result of the creative fiat. The conception of the creation of the world from nothing is invalid. Non-being is the other side of being; now the idea of nothing is the idea of non-being *simpliciter*, and therefore is an abstraction. For similar reasons the conception of a Reality which is affirmed *simpliciter*—for example, the conception of the Spinozistic substance, which is infinite affirmation, and, complete in itself, giving rise to the finite modes with their negations—is an abstraction too. At one extreme we have the idea of the Infinite, which is that of universal participation; at the other, we have the idea of Nothing, which is that of total separation. Between these lies the world of discourse, the world of definite things, and this is the only real world.

A possible objection to the above would be that if we reject the idea of pure nothing, we are unable to conceive of creation at all. Non-being is always with being; there is, then, no superposition of being upon a previous non-being. And yet, creativity is a fundamental part of experience. The answer is that our theory does not involve the rejection of creation, except in a relative sense. There can be no absolute creation; there is, at any time, at any stage of explanation, a minimum of being. But the relation between being and non-being is not static; there may be expansion of being, there may be increased inclusiveness of forms; there may be greater integration of forms, and consequently greater exclusion.

We will now sum up our doctrine of the knowledge of negative fact. (1) In ordinary discourse, every negative statement is elliptical, in the sense that it must be completed by the addition of a corresponding positive statement. Thus, the proposition, "John is not sixteen years old" entails the positive pole of the fact, namely, that John is twelve. However, it is equally true that every positive statement is elliptical in that it omits the negative pole of the concrete fact. Expression in general is elliptical, singling out either the positive or the negative pole. The positive proposition is an abstraction no

less than the negative proposition. (2) It has been maintained by some that apprehension of negative facts presupposes the use of imagination, whereas the positive aspect of the fact leaps to the eye. Thus, I go to a play; there I observe without any conscious activity of the mind that the play is a tragedy. But I must first reflect, before I realize that the play has no humor, that it is not a historical play, etc. Bergson makes an analogous point when he maintains that a negative statement is never made unless with reference to some antecedent desire. I take a book and it is obvious that it is a work of prose; but when I make the statement "this is not poetry" it is because I have had a desire for a book of poetry.

Is it true that the negative statement is on a different level from the positive statement, that it is less obvious and entails imagination in a sense in which a positive statement does not? The view that there is such a difference can not be maintained. Apprehension of a positive fact requires imagination, too. Psychologists agree that we do not attend to the given unless we are prepared for it. We must have an antecedent expectation in order to notice a positive as well as a negative fact. To return to our example of the play, does the positive fact, for example, that the play revolves around a certain character leap to the eye? Do I not have to reflect in order to realize it? The mind must be active, must be a contributing factor, in the knowledge of positive, no less than of negative facts. Perhaps it may be urged that at any rate the apprehension of specific concrete characters in the situation requires no reflection; for example, that the costume of a given actor is red. Yet even the immediate characters of experience are so interwoven with other characters, simple or complex, that they are not noticed unless first singled out and analyzed by the mind. Come back to the factor of expectation (or desire) in the apprehension of an absence. *B* is struck by the fact that his wife is not at home, because he expected to find her there. But also, if *B* had expected not to find his wife at home, then her presence there strikes him forcibly indeed. Expectation then is involved impartially both in positive and in negative apprehension.

(3) Further, it has been held that a negative statement is ambiguous, whereas a positive one is definite; thus, the proposition that John is not sixteen years old does not determine the fact that he is twelve, but is compatible with any number of propositions about John's age except the proposition that he is sixteen. This view is correct only in a very restricted sense; that from the positive pole of a proposition, I can reconstruct the negative pole, but that I can not reverse the process. (But if the negative pole is given in its completeness, as the exclusion of an infinity of forms, then the positive pole is rendered determinate.) And if we turn our attention

from formal to material truth, we see that a positive statement can be as ambiguous as a negative one. To describe an object as a man is to characterize it positively, yet not to determine it. The characteristics of an object are infinite; further, any positive statement is necessarily abstract and general, because conceptual.

In considering non-being as a factor in reality, so far we have viewed actuality statically, as something given all at once. We will now discuss actuality in its character as process. Change has two aspects, generation and decay. Consider change as modifying an object *A*: for example, *A* has become happy. This is an instance of generation within *A*, and is a passage from non-being to being; first, we have *A* not in a happy frame of mind; and then *A* in a happy frame. Thus generation entails non-being. Or let us say that *A* has become bald, that is to say, *A* has lost his hair. Here we have the opposite, non-being supervenes upon being. But change in its common acceptance as alteration is more complex; it involves at once generation and decay. *B* who used to reside in Chicago now resides in New York. Here we have a double process: the state of residing in Chicago passing into non-being (decay) and the state of residing in New York coming into being (generation). Then there is change, not as a modification of *B*, not as a transformation within *B*, but as the emergence and perishing of *B*, as such. Here, we have the contrast between the non-being of *B*, and the being of *B*. Change is then constituted (partially) by the fact that the being of *B* excludes the non-being of *B*.

Thus to the oft-repeated criticism that non-being is remote from experience, incredible, and unintelligible, we can make the answer that non-being is involved in the most familiar aspects of experience, such as change and duration, variety and plurality. Time is understood through non-being, and, in turn, illuminates non-being. The essence of time is its incompleteness. The present points to the future; there is always a "more" of time which is coming to be. Any given portion of time refers to something beyond itself which it excludes. Passage is the fact that there is another epoch on its way to the present; thus the epoch "now" exists in contrast with the epoch "later." And the contrast between the present and the future—in time—is analogous to the relation of diversity among individual things. Time is constituted through limitation; there is an area necessarily left out of the present; we have the circle once more (but a shifting circle in this case); there is what is included within the "now," and there is what is excluded from it, which is the future, (and, in a different sense, the past). And this exclusion is essential to the being of time, since without a future which is coming to be,

the "now" is nothing. *A* is now because *B* is not yet; and *B* is not yet because *A* is now.

The above is true not only of the specious present, but of the present as inclusive of all elapsed time. Time is endless; we can not conceive of an epoch in the remote future which will be "now," and then be followed by nothing. There will always be a future; "tomorrow, and tomorrow, and tomorrow"—there will be a forever more, as there will be a forever less. Everything passes but time itself. Whatever the duration of time realized, that duration will be an island in the midst of an ocean of unrealized time. The being of the present-with-the-past goes with the non-being of the other duration which constitutes the future. And this is due to the fact that time is incurably incomplete, that there is always an "other" to realized time, that the "now," specious or spacious, is constituted by limitation.

Let us analyze passage in more detail. Passage is displacement; what is present retires, and the future takes its place. The two stages are together; the perishing of *A* is through the generation of *B*. We can represent passage as a shifting relation between a static map containing the locations of past, present, and future on the one hand, and the series of events on the other, such that the events are altering their position relative to the temporal locations. Or we can confine ourselves to the "now" alone; passage consists in the fact that what was in the "now" is no longer there, but has been replaced by other elements from the future. Passage is constant substitution of elements in the "now." *A* is "now"; but now it is no longer "now"; having been driven into the past through the incursion of *B* into the "now" from the future. Thus the "now" is like a house of which the residents are continually changing. As Shakespeare says in one of his sonnets:

Like as the waves make toward the pebbled shore,
So do our minutes hasten to their end;
Each changing place with that which goes before.²

Thus, passage in its character as substitution of elements in the "now" arises from the fact that elements *a* exclude elements *b*. Time is a perpetual war between the future and the present; a war in which the future is always the victor, to be defeated in its turn as soon as it achieves victory. Time is contrast and exclusion.

Is it a myth, or is it rational speculation to say that time flows because time in its totality can be realized only under the limitation of the "now." The "now" is like a funnel through which only so much can pass and no more; the totality of time can be actualized only under the limitation of the "now"; therefore it breaks up into

² Quoted in Hallett's *Aeternitas*, p. 19.

successive epochs, it spreads out; we have the indefinite flow, the "forever more." Passage is the realization, under limitation and by analysis, of time as an infinite totality.

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REPORT OF THE NINTH ANNUAL MEETING OF THE PACIFIC DIVISION OF THE AMERICAN PHILO- SOPHICAL ASSOCIATION

THE business of philosophy still subsists pretty much *sub specie aeternitatis*, and it was transacted as usual at the ninth annual meeting of the Pacific Division of the American Philosophical Association, December 27 to 29. The plutocrats, the technocrats, and the Democrats got their share of lay attention during moments of relaxation amid the luxury of crackling open fires and fathomless cushions in which Mills College lapped her guests, but the regular sessions canvassed the severe old portfolio of logic, epistemology, and metaphysics, as well as ethics and social economy. The usually staid Business Meeting was electrified by the contention of Mr. E. A. Robinson, seconded by Mr. E. E. Ericksen and Mr. D. A. Piatt, that a philosophers' congress might be expected to have some message for these times that try men's souls. Mr. B. A. G. Fuller, however, maintained the prerogative claims of pure *theoria*, while Mr. William Savery remarked in illustration that a fundamental cause of our ethical, social, and religious confusion is our lack of a true logic of induction. Mr. H. G. Townsend and Mr. H. C. Brown seemed to summarize the official consensus that it would be a pity for the Association deliberately to affix either premium or penalty to any specific topic of inquiry. Very few dour repressions, indeed, were permitted to blanket any of the Division's gatherings, which were sustained for the most part by a repartee as amiable as it was penetrating.

After the initial amenities of afternoon tea in Orchard Meadow Hall, the delegates repaired to Alumnae Hall, where Mr. Robinson inaugurated the program with a study of "Contemporary Philosophies and Education." It was his thesis that the educational theorist, recognizing today his dependence upon metaphysics, might better trust the professional philosopher than his own musings. To this end, Mr. Robinson sketched, in staccato memoranda, the respective implications of realism, idealism, and pragmatism with regard to some ten general problems of educational theory, such as "the approach to education, the aim of education, the control of education," etc. Mr. Robinson expected some disparagement of his

neat triads, and it was urbanely supplied by Mr. J. E. Boodin. Mr. H. C. Blote feared lest Mr. Robinson confuse the more docile educator by his overemphasis on the disparities instead of the agreements among contemporary philosophies, while the less docile educator would rather derive his philosophy from his own practice than from professional metaphysics. Mr. Townsend retained faith in the professional, but in the axiologist rather than the metaphysician. Mr. S. C. Pepper, however, concurred with Mr. Robinson that only the philosopher is fit to declare on ultimate ends, and that only metaphysics is fit to justify such declaration.

Mr. George Belknap maintained, with illustrative detail from the *Republic* and the *Laws*, that "The Function of Religion in Plato's States" was to reinforce with useful lies, ritual, and mass emotion the weak junctures of the political scheme, and that Plato thus passed favorable judgment on those institutions of traditional Greek religion which fulfilled a similar function for the actual Greek state. Subsequent discussion broached a hornets' nest of scholarship and apologetics. Mr. D. W. Prall and Mr. Ericksen were ready to grant the accuracy of Mr. Belknap's interpretation, but Mr. P. A. Schilpp and Mr. W. S. Morgan claimed that it had done justice neither to Plato, to religion, nor to Plato's religion. Mr. G. P. Adams and Mr. Fuller granted that there was a secular element in Plato's religion, but believed the Orphic or salvationist element to be more genuine and important. Mr. Boodin insisted, however, that Plato was sincere in his two-fold devotion to the practically advantageous folkways as well as to his own deep religious rationalism.

The evening's symposium on "Chance and Cosmogony," a topic derived from Mr. Savery's presidential address of the previous year,¹ provided perhaps the most intense and successful coöperation of the meeting. Mr. S. C. Pepper exhibited a systematic scheme of rubrics for defining possible types and degrees of regularity and novelty. Such a context (which can not be treated justly without extended reproduction) showed orthodox mechanism, for instance, to be a limiting case, arbitrary and improbable, and enabled the description of some strange but useful categories, such as *submergent* as well as emergent novelty. Novelty at any rate *seems* to be a part of the world-pudding. It is itself a sort of explanatory principle, and whether it must itself be explained away is an open question. Mr. V. F. Lenzen focussed attention on a more specific issue, "Indeterminism and the Concept of Physical Reality." Whether quantum physics entails actual indeterminacy or merely uncertainty, Mr. Lenzen argued, can be decided only by way of a

¹ William Savery, "Chance and Cosmogony," *The Philosophical Review*, Vol. XLI, March, 1932, pp. 147-179.

definitive philosophy. The relevant philosophical questions are, first, whether the physicist's equations represent real *properties* or only *numbers*; and second, whether the status of "possible measurements" is to be interpreted in the positivistic way, the neo-realistic way, or the way of dualistic realism. The physicist, meantime, is interested in the fact that whatever elemental indeterminism there may be is found in and by means of a milieu of macroscopic determinism, where the classical laws hold to a first approximation. Mr. Paul Marhenke, having argued that unpredictability is the sole cash-value of chance, so that the inquiring mind can never be sure that either chance or determinism will prove to be absolute, addressed his critical armamentarium to discredit Mr. Savery's contentions, first, that there is indeterminism in the world now, and second, that the world had an undetermined beginning in time. For the former, Mr. Marhenke admitted the propriety of Mr. Savery's use of the physical principle of indeterminacy, but denied that chance is either necessary or sufficient to account for uniqueness and variety. For the latter, he maintained that a beginningless time-series is neither less parsimonious nor more paradoxical than the contrary, while the empirical argument is weakened by the likelihood that the notions of entropy and the expanding universe, on which it depends, are of merely partial or epochal application.

Mr. Savery recapitulated some moot items of his former discussion, and accepted amicably some of Mr. Marhenke's amendments, but reminded Mr. Marhenke that the original argument had for the most part claimed for indeterminism not demonstrative proof, but only superior formal probability, and this not of any considerable "weight." Mr. Pepper objected at large that if the doctrine of probability is applicable at all to the estimate of philosophical theory, it must be a "qualitative" probability different from the simple quantitative calculus. Mr. Savery's insistence on the world's beginning in time, however, got the lion's share of discussion. Contestants did not scruple to bandy the charge of theological bias, as Mr. Savery met allegations of Messrs. Boodin, Fuller, Morgan, and Strong, from their various points of view, that the necessity or contingency of mundane events might better be established for the present world, as a going concern, than by reference to the question of its origin. Mr. Brown doubted the propriety of the remote extrapolation from our present experiences required by Mr. Savery's theory of orthogenesis, while Mr. Marhenke and Mr. E. O. Sisson found themselves unable to persuade Mr. Savery that a finite time-series, although it contains fewer terms, is logically less simple than an infinite series.

The second day's program was predominantly historical and

critical. In the morning, the Spinozistic anniversary received recognition in Mr. Prall's "Three Notes on Spinoza's Ethics" and Mr. E. W. Strong's "Necessity and Contingency in Spinoza." Mr. Prall affirmed, first, against Joachim and Caird, that Spinoza maintained both consistently and significantly his dualism of attributes and monism of substance; second, against Broad, Alexander, and others, that Spinoza was consistent in trusting his rational intuition that the two attributes are thought and extension; and third, against Roth, that Spinoza's reference to the eternal aspect of the mind in no wise upsets his parallelism since this aspect corresponds to the pervasive and eternal *propria* of body in general. Mr. Strong's essay was an analysis of Spinoza's account of the levels of necessity—metaphysical, logical, and causal—to furnish a background for the peculiar doctrine of the active intellect's self-determination, by which Spinoza tried to preserve some reality for the ethical passion which motivated his whole philosophy. Mr. Adams commented on two Spinozistic antinomies, that of rationalistic monism and dualistic parallelism revealed in Mr. Prall's essay, and that of the demands of speculation and practice in Mr. Strong's. He found new hope, however, in the comparative humility of our latter-day "pluralistic" rationalism which trusts nature to show herself intelligible on her own terms rather than on ours. Mr. Boodin pointed out that since the primary objects of thought are in Spinoza's system the geometrical essences of extension, Spinoza does not fall foul of Royce's attempted *reductio ad absurdum* of realism.

Mr. Savery, on "The Problem of Universals," summarized acutely and severely the seven possible doctrines evolved by twenty-five centuries of speculation. He found the happy medium in his own conceptualism, which holds, first, that identity is not metaphysically real, but an *intentio mentis* corresponding to absence of diversity, and second, that there are two fundamental kinds of diversity, independently variable: diversity with respect to topography, and diversity with respect to quality or relation. With regard to the principle of individuation, Mr. Savery denied that the identity of indiscernibles is axiomatic, but considered it a more economical hypothesis than that of prime matter. Mr. Pepper and Mr. D. C. Williams objected that, far from having refuted immanent realism, Mr. Savery had himself espoused a theory differing from immanent realism only by its peculiar negative doctrine of identity; but Mr. Savery staunchly asserted that this difference was decisive.

Mr. Ericksen, who began the afternoon meeting with "Bentham's Utilitarianism and the Rise of Authoritative Economics," held that Bentham's importance lay not in the theoretical hedonism which he borrowed from Locke and Hume, but in the way in which he

succeeded in fastening on the economics of industrialism the all too congenial ethics of *laissez faire* and enlightened self-interest. We can now appreciate not only the artificiality of Bentham's notion of the egoistic economic man, but also Bentham's inconsistent reluctance, in spite of his good intentions, to apply even his own principle of utility to the discredit of competitive commercialism. Mr. Boodin saw Bentham anticipated in ethical theory by Plato's *Protagoras*, and Mr. Piatt saw him superseded in practical psychology by the richer empiricism of to-day; but Mrs. Sabin-Smith and Mr. Savery found valuable truth in the very abstractness and simplicity of Bentham's theory of the economic man.

Two studies of Locke continued the historical motive, Miss Gertrude Sanford considering "Locke's Ethical Theory" and Mr. D. S. Mackay "The Development of Locke's Empiricism." Miss Sanford maintained that the too wholesome common sense of Locke's ethics resulted in an inconsistent compound of theistic rationalism with utilitarian hedonism, and suggested that Locke might nowadays erect a more coherent materialistic hedonism on some of the findings of endocrinology. Mr. Mackay reported, from a comparison of the 1671 draft of Locke's *Essay*² with the first published edition, that Locke's whole emphasis shifted from an original empirical methodology, with a distinctly practical and ethical aim, to the dualistic metaphysics of knowledge, with its train of skepticism and equivocation, which has been his dire legacy to posterity. Three prime movers in the transition were the suggestive effect of such metaphors as the *tabula rasa*, the distinction of primary and secondary qualities, and Locke's nominalism. In the conference that followed, Mr. Williams suggested that Locke's presumed movement from a methodological to a metaphysical theory of knowledge was an inevitable and even a desirable scientific advance; but Mr. Adams, Mr. Piatt, and Mr. Mackay himself believed that Locke's difficulty was rather that he moved from a good implicit metaphysics to a bad explicit one. Mr. Adams ruled that the good metaphysics was a neo-realistic monism, but the others did not make it clear to the non-pragmatic hearer whether it was a monism or something which sublated monism, dualism, and their antimony. Mr. Boodin, to illustrate the slight hold of dualism and rationalism on Locke's real thought, even in Book IV of the published *Essay*, told how William James referred his seminar of 1897-1898 to Locke for the prototype of the doctrine of truth as a leading to and terminating in immediate experience. Further illumination was shed in detail by the discussion of Miss Georgiana Melvin, Mr. Piatt, Mr. Townsend and

² *An Essay Concerning the Understanding, Knowledge, Opinion and Assent*. Edited by Benjamin Rand. 1931.

Mr. Strong, concerning the psychological, metaphysical, and logical functions of the "idea" in Locke's writings, and his views of the relation between the abstracting and synthesizing powers of the intellect. Meanwhile, Miss Sanford's diagnosis of the philosophic temperament as a symptom of hyperthyroidism had incurred the respectful skepticism of Mr. Robinson and Mr. Brown.

In the evening the division assembled for the annual dinner and the presidential address. Mr. Brown, on "Mind, an Event in Physical Nature," championed a rejuvenated materialism with a depth and detail which have already promised the subject a place of honor on next year's program. He held that the excesses both of those psychologists who deny the reality of mind and of those physicists who deny the reality of matter, can most properly be chastened by a world-view which sees both minded and unminded matter as adjectival modifications of the *φύσις*, the one substantival stuff. In the problem of qualities he recognized the crux of the materialistic theory, and argued boldly that matter must be supposed to be intrinsically qualified, quality and structure being twin inseparable aspects of every particle of it. He did not pretend to be able precisely to locate all qualities, but thought it plausible that sensible warmth, for instance, actually is the character of molecular acceleration, and that a carious tooth accurately synthesized in the laboratory would actually have an ache in it. For the rest, he accepted current doctrines, especially E. B. Holt's, of the organic response-pattern and the "kinesthetic halo" which is its conscious report. In singularly complete outline, he displayed the adequacy of these two components to account for the standard phenomena of psychology: sensation, perception, and affection; illusion, imagination, memory, and thought; self-consciousness, and even ethical idealism. In every case "the conscious content is the quality of the structure dominating the engrams," and the mind as a whole is an organized pattern of physical events, whose peculiar motive force is a tendency (not an "aim") to preserve the organism's metabolic balance.

The annual business meeting on Thursday morning left time for only two regular philosophical transactions, of remarkably diverse sorts of excellence. In his "Items in a Linguistic Propaedeutic to Logic," Mr. Sisson proposed to explore the prelogical no-man's-land of mystery which invests the process by which words and grammatical forms mean *überhaupt*. His rigorous and concentrated paragraphs on symbolism, the term, the copula, and the proposition, defy further epitomization, but of especial interest were his claims that the copula has no denotative meaning but only assertive force, and that the three so-called laws of thought are merely the fundamental conventions of language. Mr. Schilpp approved heartily

of Mr. Sisson's program. Mr. Piatt, although professing general satisfaction with it, would have preferred clearer indications of a unifying philosophical purpose, and a greater reliance on empirical anthropology and the philosophy of experimentalism. Mr. Savery defended Mr. Sisson's main articles, but advocated some amendments from the side of realistic logic. Mr. Townsend put a term to the discussion by wondering what significance could be attached to the fact that some of his colleagues accompanied the indispensable phrase "in the mind" with a gesture toward the skull, some toward the circumambient atmosphere, and some toward the diaphragm.

Mr. Fuller's essay, "'To Sleep, Perchance to Dream,'" recited with acute and genial eloquence the difficulties created by the apparently incorrigible fitfulness and discontinuity of mental life, for those philosophies which assert that self-conscious personality is the one ground of existence. The personalist's *ad hoc* allegation of unremembered dreams he found productive of hopeless paradox, while he rejected as equivocation Mr. Mackay's subsequent suggestion of unconscious experience. There were no idealists present to defend the doctrines attacked by Mr. Fuller, and Mr. Brown and Mr. Townsend indeed refused to believe that any rational being ever had defended them. Mr. Mackay and Mr. Boodin understood that Mr. Fuller's crucial problem was the general one of personal identity, but thought that the latter might better be debated independently of the validity of idealism, while Mr. Savery understood that the crucial problem was that of the validity of idealism, but thought that this might better be debated (on the principle of Occam's razor) independently of the problem of personal identity.

The hospitable entertainment extended by Mills College was crowned by a farewell luncheon, Thursday noon, when the members of the Division received of President Aurelia Reinhardt a message of valediction at once whimsical and challenging.

DONALD C. WILLIAMS.

THE UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

BOOK REVIEWS

Symbolic Distance. S. BUCHANAN. (Psyche Miniatures.) London: Kegan Patl, Trench, Trubner & Co. 1932. Pp. 110.

This excellent little book is an attempt at a philosophical analysis of language, its attention being chiefly directed upon metaphors and analogies. Nevertheless, its value lies mainly in its stimulating effect rather than in its results, for it is too brief to have arrived at general propositions concerning its subject-matter, or even to

have proved the practical value of its method of approaching the logical analysis of language. In spite of its brevity, however, the work is ingenious, clever, and eminently worthy of consideration.

Mr. Buchanan's thesis is that the intellectual disciplines are concerned with symbols as their essential subject-matter. Nevertheless, our present-day training does not fit us to discover and inspect the character of the signs which represent the things symbolized. It is hazardous to the success of intellectual activities to confound symbols and things, for if one fails to realize the symbolic character of the objects of reasoning, one may misinterpret them to be apparently substantial entities. Such a misconception results in the creation of fictions. Hence it is desirable for logicians and linguists to study the relation between symbol and thing, and to develop analytic methods for the discovery and reduction of fictions. An important relation obtaining among things and their representative symbols is symbolic distance. This refers to the degree of separation of sign from what is signified. The greater the distance, the greater is the possibility of distorting the original.

An important source of fictional deception is the metaphor. Mr. Buchanan analyzes metaphors by expanding them into what corresponds to algebraic matrices. The use of the term "matrix" may tend to repel those readers not trained in mathematics. A knowledge of mathematics is, however, unnecessary for an understanding of the method employed. Matrices, as used here, are merely rectangular arrays of words arranged in rows and columns such that "the relational order in one row is repeated throughout the others, and the relational order of one column is repeated throughout the others." The metaphor represented by the matrix can be selected through the proper choice of rows and columns. Other choices will give different, but related, metaphors. In short, the matrix is merely the analyzed and expanded metaphor or analogy, showing the relation between the symbols and the things symbolized. Mr. Buchanan also introduces what is called in projective geometry "projective correspondences of ranges of points" to explain his expansion of metaphors. Here again a knowledge of mathematics is unnecessary. In fact, one criticism of this book is that the mathematics introduced into it is fairly gratuitous. Perhaps a more complete study of the subject would necessitate the use of higher mathematics, but it is not required here.

As was said above, this work is too brief to be of intrinsic value as a philosophical treatise on language. Nevertheless, it is highly stimulating, and shall have served its purpose if it impells some philosopher-logician to concern himself seriously with its subject-matter. It also is interesting and important for its method of ap-

proach. Hence the review has emphasized this feature of it. It is not a book for the lay reader, but on the other hand, it is not as technical as it appears to be at first glance. It is a thoroughly delightful little book, and though limited in scope and barren of important conclusions, deserves to be recommended.

KURT EDWARD ROSINGER.

HARVARD UNIVERSITY.

Fact, the Romance of Mind. HENRY OSBORN TAYLOR. New York: Macmillan Co. 1932. Pp. ix + 166.

Those who are familiar with this writer's genial and sympathetic reconstructions of classical and medieval life will turn with high expectations to his endeavor to disclose to us the vital structure of *Fact*, as it has been disclosed to him by his varied and comprehensive study of past cultures; and if this high expectation is disappointed we must blame the philosophical confusion which is the intellectual climate of our time. Few, one would think, are so well qualified as Mr. Taylor to show us how the passage of time has shaped the form of *Fact*, leaving us with a contemporary *Fact* more rich and varied, perhaps, but certainly no less relative than its predecessors. But this is not what Mr. Taylor does. He stands, just as he describes Karl Pearson, with one foot in scientific dogmatism, the other withdrawn—but without anywhere to put it. His fundamental philosophy is still the rationalism of Aristotle, as it has come through the scholastics into even our most recent philosophy.

Fact is studied as it finds shape in primitive culture, in religion, in art, in science, and in philosophy. In a penultimate chapter we are offered the confirmation of one faculty by another—of art or religion by science, for example—as the final criterion of truth, and the book concludes with an illustration of this interplay in Confucianism, the Church Fathers, Buddhism, and Greek tragedy.

Throughout the book there is constant and sudden shift from a naturalistic conception of cultural novelty as requiring some external stimulus to a purely rationalistic conception of human faculties arising as the mere explication of an innate reason. The reader will find on page 7 the clearest expression of the first view, and on pages 21, 26, 33, 36, and most baldly on page 112, that of the second. The result of this shift is that genuine problems are often suggestively raised, only to be eliminated at once by the assumption that our own immaculate reason was always actively at work in the past, conforming the more primitive mind towards its apotheosis in ourselves. The medieval conception of a human intellect suddenly appearing with Aristotle, or perhaps with Thales, still blinds the eye to the scientific achievement of Babylon and

Egypt. It would be presumptuous to suggest here what a thinker of Mr. Taylor's erudition and insight might have done with his theme if he had not first capitulated, out of deference to what he calls "stubborn fact," to the popular ideology and intellectual conceit of our time. These facts, or rather these prejudices, must indeed be stubborn to make mincemeat of a historical insight so genuine and so profound as Mr. Taylor's. Let us note only the predicament, most apparent in the discussion of the relation of science to philosophy, to which the contemporary rationalist is inevitably led.

The writer's rationalism is essentially that scientific dogmatism, peculiar to the nineteenth century, which refuses to question the origin or the validity of its own definitive concepts; but this form of rationalism is invalidated to-day by contemporary physics, and must profess to be something else. We are told that the sciences can not be the critique of their own criteria, but that philosophy may undertake this criticism. The philosophic criterion is said to be that of logical consistency, the sciences apparently delegating this instrument to philosophy. This may be unjust, but in some way the sciences are expected to defer to a logical criterion exclusively philosophical. Mr. Taylor takes occasion, accordingly, to rebuke Mr. Dewey for a purely experimental philosophy, and to present Mr. Whitehead's *Process and Reality* as an example of what philosophic method ought properly to be. It is somewhat of a shock to see Mr. Whitehead's method—which presumably consists in the application to philosophical speculation of the logical or symbolic method of mathematical physics—presented in contrast to Mr. Dewey's as a super-scientific critique; but one can understand how anyone who identifies scientific experimentalism with the laboratory technique of the physicist in neglect of his mathematical or logical technique might come to such a misunderstanding.

HUGH MILLER.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

JOURNALS AND NEW BOOKS

REVUE PHILOSOPHIQUE. 58^e Année, Nos. 1 et 2. La psychologie fonctionnelle: E. Claparède. Dans le taureau de Phalaris: L. Chestov. Le scepticisme de Hume: J. Laporte. L'esthétique de Marcel Proust: A. Tilgher.

Cohn, Jonas: Wertwissenschaft. Erster Teil: Äxiotik (Allgemeine Wertlehre). Zweiter Teil: Systematik. Dritter Teil: Ergetik. Lehre von der Wertverwirklichung. Stuttgart: Fr. Frommanns (H. Kurtz). 1932. xiv + 196 pp.

Boring, Edwin G.: *The Physical Dimensions of Consciousness*. (Century Psychology Series.) New York: Century Co. 1933. xii + 251 pp. \$2.25.

Cunningham, G. Watts: *The Idealistic Argument in Recent British and American Philosophy*. (Century Philosophy Series.) New York: The Century Co. 1933. xiii + 547 pp. \$4.00.

Field, G. C.: *Prejudice and Impartiality*. New York: Robert M. McBride & Co. 1933. 116 pp. 80¢.

Glockner, Hermann: *Johann Eduard Erdmann*. (Frommanns Klassiker der Philosophie.) Stuttgart: Fr. Frommanns (H. Kurtz). 1932. xx + 200 pp. 5 M.

Joad, C. E. M.: *Great Philosophies of the World*. New York: Robert M. McBride & Co. 1933. 80 pp. 45¢.

Kallen, Horace M.: *Individualism. An American Way of Life*. New York: Liveright, Inc. 1933. x + 241 pp. \$2.00.

Mace, C. A.: *The Psychology of Study*. New York: Robert M. McBride & Co. 1933. vii + 96 pp. 80¢.

Row, T. V. Seshagiri: *New Light on Fundamental Problems including Nature and Function of Art. A Critical and Constructive Study of the Problems of Philosophy from the New Point of View of Henri Bergson*. Madras: University of Madras. 1932. xv + 273 pp.

Swift, Arthur L., editor: *New Religion To-day*. New York & London: McGraw-Hill Book Co., Inc. 1933. xvi + 300 pp. \$2.50.

NOTES AND NEWS

TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

Dr. Maurice Baum is quite correct in stating that the essential ideas of James's pragmatism can be traced back to the period of his earliest publications. This does not prove that "the pragmatic movement" began then, nor does it prove that James was in error when he said that Peirce's "principle" lay "entirely unnoticed by anyone for twenty years." I take it that James did not intend to deny his own familiarity with that principle, but only to say that it had received no attention from the philosophical world at large. In any case, Dr. Baum's interesting article serves to call attention to the remarkable tenacity of James's thought and to the depth of its roots.

RALPH BARTON PERRY

HARVARD UNIVERSITY.

George P. Conger, Associate Professor of Philosophy at the University of Minnesota, has been granted sabbatical leave for the year 1933-1934, in order to go to India for the study of Indian philosophies and religions.

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Volume XXIX. No. 24. November 24, 1932.

The Above-and-Below Notion. GEORGE R. MONTGOMERY.

Professor Driesch on Philosophical Methods of Procedure.

MARVIN FARBER.

Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 25. December 8, 1932.

The Missing Link in Epistemology. C. A. STRONG.

Tangling Cognition. FREDERICK J. E. WOODBRIDGE.

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Volume XXIX. No. 26. December 22, 1932.

The Early Draft of Locke's Essay. STERLING P. LAMPRECHT.

Reflections on Infinity. RALPH B. WINN.

Book Reviews. Journals and New Books. Notes and News. Index for Volume XXIX.

Volume XXX. No. 1. January 5, 1933.

On the Existence of a Necessary Being. JEROME GASPARD.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 2. January 19, 1933.

Dr. Whitehead on Perception. DANIEL CORY.

The Development of James's Pragmatism Prior to 1879.

MAURICE BAUM.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 3. February 2, 1933.

Word-Portraiture. VIRGIL C. ALDRICH.

Book Reviews. Journals and New Books. Notes and News.

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- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
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Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
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Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917.
Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
Subscription \$4.00. 300-400 pages. Founded 1895. Edited by W. S. Hunter.
An annual bibliography of psychological literature.
- Archives of Psychology.**—Columbia University Post Office, New York.
Subscription \$6.00. 500 pages per volume. Founded 1906. Edited by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
Subscription \$5.00; foreign \$5.25. Acting Editor, Henry T. Moore.
Quarterly. 448 pages annually. Founded 1906. Abnormal and social.
- Psychological Clinic.**—Philadelphia; Psychological Clinic Press.
Subscription \$3.00. 288 pages. Edited by Lightner Witmer. Founded 1907.
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- Journal of Educational Psychology.**—Baltimore; Warwick & York.
Subscription \$4.00. 540 pages. Founded 1910.
Monthly (9 numbers). Edited by Harold O. Rugg and cooperating board.
- Comparative Psychology Monographs.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter.
Published without fixed dates, each number a single research. Founded 1922.
- Psychoanalytic Review.**—Washington, D. C.; 3617 Tenth Street, N. W.
Subscription \$6.00. 500 pages annually. Psychoanalysis.
Quarterly. Founded 1913. Edited by W. A. White and S. E. Jelliffe.
- Journal of Experimental Psychology.**—Princeton, N. J.
Psychological Review Company. 900 pages annually. Experimental.
Subscription \$7.00. Founded 1916. Bi-monthly. Edited by Samuel W. Fernberger.
- Journal of Comparative Psychology.**—Baltimore; Williams & Wilkins Co.
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- Journal of Social Psychology.**—Worcester, Mass.; Clark University Press.
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Quarterly. Psychodiagnostics and allied studies. Founded 1932.

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THE JOURNAL OF PHILOSOPHY

A CASE OF THE PATHETIC FALLACY

MRS. Swabey's article on logical force in demonstration ¹ leaves a reader with at least two baffling questions. If "logical force" is somehow something more than the unhappy "nominalists" have shown it to be—quite conclusively, as they suppose—is it not a somewhat serious flaw in a critical objection to their view merely to insist once more upon this familiar opinion, as if it were not exactly what their work has actually exhibited as a mistake, what their arguments have been consciously and conscientiously directed against? And, secondly, what of their actual analyses, than which it would be difficult to find anything in current philosophy more meticulous, more ingenious, more elaborate, or more clearly demonstrative? This baffling article speaks as if such analysis had destroyed something precious, namely, the logical force and the deductive concatenation of demonstration. But analysis is in this respect powerless, as every one knows, the writer of the article included.

If after the analysis is completed any one still wishes to call the formal results demonstrations without logical force, such a critic would seem to be under some slight obligation to exhibit their logical failure. And if he admits their logical success, whether this is "force" or not, then the validity here found would seem to be quite accurately described in Mrs. Swabey's own opening paragraphs, and the rest of what she says would be merely an objection to the description. But the description can hardly be dismissed as absurd. The terms in which it is given are not accidental; they have been carefully and painfully chosen as most scrupulously indicative of the actualities involved. And they have been chosen not in enthusiastic haste, but in mature reflection by men who have spent years of attention not only upon the exploitation of logical method in detailed systematic construction, but also upon the general questions of the validity and the character of the systems constructed. If in the opinion of some one else a better name for the character of these systems would be "logical force," then it is the logical force of demonstration that the description applies to, and there is no quarrel except over this one added descriptive term. But to the term itself

¹ This JOURNAL, Vol. XXIX, No. 16, pp. 431-439.

no logician would object, I think, unless it is used to mean more than the most rigorous examination of logical systems ever undertaken or carried through has been able to find in them, and is then insisted upon as essential but never explicitly made out.

To put my difficulty a little more briefly, these "nominalists" are said to miss the vitality of genuine logical conceptions which Mrs. Swabey tells us are "cogitations of the psychophysical organism." Cogitations are neither "frozen" nor "abstract"; from them the breath of life has not departed. Of course not; but it is the abstract principles upon which such processes of valid thinking proceed and the structural systems developed by this procedure that alone constitute what can be put down in discourse as logic, whether as rules for operation or as descriptive forms.

That this whole process is circular in the only sense in which these dangerous "nominalists" call it circular is not their discovery. It is the ancient and familiar doctrine that first principles can not be demonstrated, and hence that if it is the business of philosophy to establish first principles, it is the business of philosophy to examine these in the light of experience instead of pretending to prove them by finding what Mrs. Swabey calls "anterior stages" from which one "advances" to them. Logic serves deductively to lay out what follows from the first principles. And again, whether these consequences or the principles themselves are applicable or not to the world is a matter for empirical verification.

But what follows from any principles is only what is really asserted when we assert them. In assertion the principles themselves are the discursive vehicle; but it is only what this vehicle actually carries that arrives at the end of the deductive journey. Nothing follows from any principles that is not explicitly in them, either in their general form or in the more determinate meanings of them as defined with reference to a given subject-matter. And if it is objected that this is confusing *explicit* with *implicit*, and so missing the whole point of deduction, we have only to remind ourselves that on any definition of implication if A implies B we can not have A without having B , so that the assertion of A , if A really does imply B , no matter whether A is one statement or many, has already given us what we assert when we assert B , though commonly in such a complex structure that we have not distinguished B 's determinate form. The interesting fact about actual inference is not the logical basis of deduction in implication, but the natural possibilities of our world and of language in indicating aspects of that world, of the sort that allow us to formulate implicative relations in assertions that are apparently worthy of belief. If color implies extension or effects imply causes, the basis for such statements is either definition itself

or else belief in the genuineness or even the universality of the apprehended content to which our linguistic or other symbolic terms are taken to be unambiguously applicable. But modern logicians have paid very special attention to the nature of symbolism; and they are certainly not under the delusion that principles assert themselves. Their elaborate discussions of the so-called sign of assertion more than amply show this.

Nor in considering abstract structures in analysis are they supposing that such structures exist concretely. They do not at all deny that they abstract from the concrete thinking of men what is concretely found only as present to or in such thinking. Thus these logicians do not fall into Mrs. Swabey's confusion—fairly anomalous in the present state of logical theory—of supposing that their abstract forms are not abstractions, or that logical form could be anything *but* abstract. It is even dead, if you like, though why what is dead should be either uninteresting or unimportant or non-logical is not easy to see.

Thus it is not derogatory to say of a view of the nature of formal logic that it takes no account of dynamic processes. That form is not process is not a heresy invented by symbolists or nominalists. It was made out thoroughly enough by Aristotle in various contexts, and Plato had been only too clear on the point. But as some earlier philosophers had either denied process or else denied form, the adequacy of Aristotle consisted in part of affirming the distinction between them as categorical. The whole of the *Physics* might plausibly be cited as merely one extended exposition of this distinction. What Mrs. Swabey apparently wants is to exclude active thinking process, which is temporal, from what she calls the logical "advance from anterior to subsequent stages"; for she says that whether or not the apprehension of the course of this advance requires the experience of temporal succession is logically irrelevant. But at the same time she demands the breath of life in it. Now the breath of life is temporal and dynamic. If we are to be said to keep it in logic, then it can not be said that the experience of temporal succession is logically irrelevant. The vital nature of logic, if its nature is essentially vital, can not be irrelevant to an account of that nature.

But breathing, like other dynamic operations, can not be described without a time-variable, nor can it be felt as vital character without being apprehended as temporal. What vitality, what life is breathed into the explicitly described nature of logic which is not its *apprehended* nature? And if we do not in any case apprehend this vital breath, what possible sense does it make to say that in an adequate account of the systematic nature of logic, terms such as vitality and the breath of life are properly applicable and even es-

sential to the adequacy of one's views, which may thus come to include that elusive element of force that Mrs. Swabey cherishes?

Of course the answer here is familiar. There is living logical process that is non-temporal and *sui generis*; there are conceptions that are themselves active forces; reason itself is a functioning, and hence the structure of reasoning is not static. Abstraction kills, analysis destroys, and rigorously formal symbolic logic is falsification of rational discourse, a mere mechanical fetish instead of living thought. But these are the statements that the symbolists have explicitly coped with and criticized for a generation. No symbolist need suppose, and I take it that no intelligent symbolist does suppose, that logical structures are concrete existential entities, or full descriptions of even the most narrowly rational activities of living minds. When he says that discursive concatenated logical demonstration is only necessary because of our psychological limitations (Mr. Eaton is quoted to this effect) he does not rule out genuine deductions; he only notices what it actually is in cases where we all find it. But, among many other elder thinkers, it was such philosophers as Descartes and Locke that noticed this, not the perverse moderns. Locke's account of intuitive and demonstrative knowledge and Descartes's fourth rule in the *Discourse* are sufficient evidence of the view. Citing fifty other passages or fifty other authors would make it no surer, since such characteristic passages are examples both of the best known thought of the seventeenth century and of the most familiar ideas ever since.

When Mrs. Swabey speaks as if Mr. Eaton had substituted "some kind of preëstablished harmony" for genuine deduction, she is again completely baffling, if she intends this as adverse criticism of a view of logic. In the first place the harmony is not *pre-established* at all; it is exhibited explicitly in the defined and defining rules among the postulates as the actual deductive connections present in the system. If when these are apprehended they look to Mrs. Swabey like a preëstablished harmony, then one can only say that that is exactly the character that actual exhibited deductive systems appear to Mrs. Swabey herself to have. That formal logic is analytical in its procedure is of course obvious. But what analysis does is simply to show that so-called later properties and relations were either not rigorously deduced by inference based on implication, but found or invented and added, or else that they were "wittingly or unwittingly introduced" in the original postulates. If they were not there introduced, then logically valid inference can by definition never deduce them; since demonstration is demonstrably tautological. Mrs. Swabey's geometrical example falls perfectly clearly under this account, and if she refuses to believe in the tautological character of

demonstration, surely we may expect her to show the flaws in Wittgenstein's proof, instead of insisting or denying this demonstrated tautological nature because to admit it makes logic seem dead and formal to her.

Mr. Veblen, for example, has, as is surely quite generally known, given alternative sets of postulates from which demonstrably a whole geometry can be and has been strictly—and tautologically—"deduced." "Wittingly or unwittingly," like the other inventors of postulate sets, he has actually laid bare and then established by analysis the harmony of various systems. To say that it is hard to see in what the connection of their parts consists looks very much like refusing to apprehend the primitive notions and the rules of operation which the far from meaningless symbols indicate.

As to the supposed inadequacy of the machine analogy, what does Mrs. Swabey mean to say here? Is the number system not a logical structure? Or are the results of the calculating machines not really numerical results? Are we to deny that what they produce is the unambiguous indication of the same logically valid structure as that which a mind operating upon the same data and following the same principles exhibits as the logical results of its logical operations? A machine does indeed work by means of wires, wheels, and levers; but does not a psycho-physical organism at least apparently make use of nerves, cells, and muscles? And of what possible use would machines of this sort be to rational creatures if they did not operate according to the principles of logical structure? That a machine operates causally is parallel to the fact that a psycho-physical organism operates organically. But why the structure of the results, or the nature of the principles of calculation in either case, should be confused with the materials of the functioning structure or the mechanical or organic operations involved, is quite unaccountable. The fallacy here is just the reverse of that which Mrs. Swabey attributes to realists as a "device," which however does not, as she asserts it does, involve separation any more than distinguishing color from shape involves separation. To fail to make the distinction, whether with respect to machines or to human organisms, is to fail to distinguish logical structure at all and so to leave it embedded in the existential matrix where it can plausibly be spoken of as alive and breathing.

Why Mrs. Swabey should suppose that Mr. Lewis's now famous dictionary illustration of his peculiar view of ultimate circularity in definition is taken by him or by any one else to be in all other respects an analogue of deductive systems is a mystery. And to say that Mr. Lewis has apparently never thought of the possibility that internal self-consistency might constitute a common criterion of all supposedly

alternative logics is frivolous. For the assertion is made in the face of the fact that this is the obvious assumption on the basis of which Mr. Lewis characterizes a system as logical, so that alternative logics may even conceivably constitute a genuine variety of self-consistent systems. What seems not to have occurred to Mr. Lewis's critic is that logicians all admit what she says might furnish the outline of the one non-alternative logical system, which is what she no doubt calls logic itself with its breathing and vital force. But more sceptical and apparently more industrious logicians have also made some attempt to see exactly what consistency may be taken to mean—as in recent articles by Mr. Weiss,² Mr. Nelson,³ and many others. They have discovered that the classical logicians were right in noticing its purely negative function in ruling out the inconsistent, its powerlessness to bring about any systematic accretions, and the usefulness on the other hand of more powerful postulates and quite other primitive ideas than the elementary or perhaps merely vague sense of the term "consistency" that Mrs. Swabey seems to intend.

One may with Mr. Sheffer call the common properties of alternative logics "foundational logic." One may with Mr. Lewis, if I follow him, take this proposed "outline of a basic non-alternative logic" to be the very simple fact that we agree to assert what we assert and not to deny it. Mr. Schiller keeps telling us that this basic logic amounts to nothing but the personal moral injunction to agree to mean what we say, which involves some attempt to say exactly what we mean. But the filled-in outline would be only a dead system, rigorous in being tautological. The breath of life in it could only be the assertion of it, or the logically irrelevant expression of belief in it, along with the further belief, in Mrs. Swabey's case, in a special, unrevealed and unanalysed "logical force" inhering somehow in the "principle of inference" and carrying with it "a certain inevitableness and impulsion." But there is nothing more inevitable than an exhibited tautology. As for impulsion, that is "force" in quite another sense—moral, practical, or merely natural.

As for the "brief concluding remarks" of the criticism we may rejoin that with totalities it has been shown that in characteristic cases we can not deal at all without denying our own assertions, running into contradictions. With classes it is the despised "nominalists" who alone have dealt at all adequately. If "nominalists" do really abhor universals, at least they will hardly be accused of having failed to consider them pretty fully; and of the men whom Mrs. Swabey seems to designate nominalists, none of them, so far as I know, claims this label. Nor is there any reason on earth why a

² *The Monist*, October, 1928.

³ *Mind*, October, 1930.

serious thinker should eschew all discussion of what he happens to abhor. What nominalists have doubted is the sort of universal that is entirely unnecessary to logical demonstration, the kind that may be—for all one can tell by what she says—Mrs. Swabey's kind of universal. And in the attack upon such universals what has been impugned is that very genuineness that Mrs. Swabey assumes and speaks of as if it had never been a matter of controversy. Logical systems "taken as genuine" appear to be for her not the ones we know, nor those that have been so elaborately analysed, but only such unanalysed systems as are entirely comprised in her notion of consistency itself, a non-impulsive "force," if ever there was one.

That the postulates of a system are not entirely free is in one sense clear enough; we are only limited natural creatures with limited imaginations and limited interests. But if in the face of the multitude of alternative sets that have been invented any one is sure that men are not free to go on indefinitely inventing new ones, the ground of his assurance might well be given; it would be valuable.

I hope that I have justified my feeling that Mrs. Swabey's article is really baffling in the questions it raises. The logicians certainly do not need an amateur to defend them, and perhaps an answer to this criticism of their views is gratuitous. But it would seem to me too bad to let it pass, for fear it might encourage us lay readers in the continued neglect of a point of view which is hardly to be appreciated without some attention to the work of symbolic logicians and the light that this throws upon the nature of logic. "Force" is all very well, and no doubt we all cherish the breath of life. But logical rigor is, after all, for our views of the nature of logic, a more important and more relevant consideration.

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LOGIC AS LANGUAGE HABITS VERSUS LOGIC AS FORMAL TRUTH

RESPECT for the achievements of symbolic logic in this century, for which I protest an admiration equal to Mr. Prall's,¹ does not always imply clarity as to what has been proved by it, even though one may feel certain that something important has been proved. In fact, to my mind, dangerous tendencies are afoot to claim that sym-

¹ Since it seems to me that no purpose would be served by an attempt to settle verbal disagreements when a fundamental difference of viewpoint is involved, I shall reply to Mr. Prall's article (this JOURNAL, pp. 113-119) in a broader, freer vein which will nevertheless, I hope, meet the main issue.

bolic logic has done many things that it has not done, tendencies which threaten to deny the primordially and autonomy of logic. There is, for instance, the propensity to assume that, in the same way that modern mathematics has apparently revealed that there are many alternative geometries, all equally valid and none enjoying a privileged position or priority over the rest, similarly the development of symbolic logic has shown that there are many logics, all standing on an equal footing as internally self-consistent systems and all alike entirely arbitrary in their assumptions.

Such an analogy, however enlightening, seems to me to be misleading on two counts. In the first place, although there may be no foundational geometry presupposed by all other geometries, this is not the case as regards logic. That there is a "logic of logics" whose laws serve as common criteria and presuppositions of all disparate "logics" is a point hardly to be denied. Any formulation of the laws of logic (or for that matter of the rules of any theoretical system) is itself subject to the laws of this foundational logic, which has to be assumed valid before any significant statement of the particular laws of a particular calculus can be made.

In other words, the very possibility of there being a system and of its being tested as such on any terms requires its conformity to certain basic principles of *consistency* and *inference*. To build a system means, for one thing, to lay down certain *rules* or operations to cover certain *applications*; and whether their employment be described as similar to the mathematical relation of values to their variables or by the syllogistic relation of rule-case-result, in any event it involves those essentials of inference the "ground-consequent" and "law-instance" relations; that is, it embodies the notion of a union of law and instance by a "because-therefore" connection leading to a conclusion. Also any system-building worthy of the name² must possess *operational consistency* or integrity; that is, it

² The danger of placing a positivistic interpretation upon the operations of substitution and inference in logic is that their purely formal character will be forgotten, and that they will be taken simply as behavioristic manipulations expressive of trial and error or the replacement of one language symbol by another according to practical agreement. The mere fact that inference appears incapable of expression in the symbols of a logical calculus (*Principia*, 2d ed., p. 9) is no indication that it is an extra-logical act. On the contrary, inference as a formal process of complex relations should be listed among the postulates or principles in accordance with which conclusions are drawn of every logical system.

In so far as the passage from law to instance, from ground to conclusion, is regarded as controlled wholly by natural forces of human behavior (those listed by physiology, chemistry, and physics), such a process remains just what it is—a physical process, but not *proof*. Whenever, on the contrary, operations are really taken as proving anything, their movement or advance is recognized as due not to the pressure of natural conditions on the "prover," but as springing

must proceed in accordance with the rules laid down, and keep its promises in its performance. To this requirement of consistently sticking to its postulates, even the "logic" that made inconsistency its rule of operation would be no exception, since unless it remained consistent in its inconsistency, it would hardly retain enough unity to be called a system. Yet obviously this requirement of operational consistency, which seems to me the most basic kind, and which clearly involves the operation of the principles of identity, contradiction, and excluded middle, is not the same as the demand for the consistency of the matter of the postulates of a system with one another, with which the geometer appears concerned. The test for consistency used by geometers (which takes the form of exhibiting some concrete interpretation which fulfills all the postulates) rather takes such operational consistency for granted.

Now granting that no symbolism (Aristotelian, Boolean, Russellian) has ever been fully adequate to express the laws of this logic, and that perhaps none can ever be, nevertheless there seems that about the alternative "logics" that makes us know better what this foundational logic is like (somewhat as the imperfect whiteness of a page may help us to know what perfect whiteness is); and to me it seems plain that those logicians who stress necessary relations, formal validity, entailment, and the requirements of consistency and deduction mentioned above, are closer to that basic logic than those who emphasize accidental relations, nominal definitions, truth-values and implications (strict or material) of propositions taken as true to fact.

In the second place, the analogy of logic to geometry seems dangerous because, although it rightly calls attention to the act of free postulation at the basis of a theoretical system, it often does this by appearing to deny any control by principles other than those listed in the postulates, and by seeming to proclaim the entirely conventional and fortuitous character of logical systems in their basic aspects. Such a tendency, which finds expression in the attempt to reduce logic to a game of words, to a mechanical legerdemain with declaratory symbols, or to tautologies that "say nothing," is a misleading half-truth. For although the postulates of "logics," like those of geometries, are in part arbitrarily selected (and thus may differ widely from one another), the development of every system rests on the fulfillment of certain common requirements of consistency and inference, which the logician (or geometer) *is not free not to assume* so long as he adheres to any organized theory; yet

from the relational pattern of the evidence itself, and as entirely sustained through the formal articulation of the structure. Cf. the writer's *Logic and Nature*, p. 110 f.

which are ordinarily only very partially or imperfectly stated in his avowed postulates. While this omission of logical postulates is no surprise in the case of a geometry, which is well understood to derive its propositions from a set of stipulations by granting and utilizing the methods of formal logic without explicit mention of them, it is very surprising in the case of a logical calculus, since its content is supposed to be precisely all the formal principles in accordance with which the reasoning is done. Accordingly, no little comment is occasioned when it is noted that the criteria and modes of procedure of a "logic" are not fully declared in its rules; while in a vain effort to escape this predicament a mistaken appeal is made by some logicians to pragmatic criteria or to factual correspondence, instead of to a more fundamental logic. The real situation seems to be that "logics" do not ordinarily (as might be expected) test themselves wholly on their own explicit terms, but tacitly appeal to more general principles in accord with which their deductions are drawn and which serve as their final test as systems.

By overlooking these canons of a non-alternative logic, which act as criteria of alternative systems *as systems*, certain recent writers are able to make a specious case for the contention that logic has nothing to do with truth. Thus Mr. Santayana entirely dissociating truth from mathematics and logic declares:

Truth is not broached in pure dialectic, which is only the apprehension of a system of essences. . . . Logic and mathematics are not true inherently, however cogent or extensive. They are ideal constructions based on ideal axioms; and the question of truth or falsity does not arise in respect to them unless the dialectic is asserted to apply to the natural world.³

A position not very dissimilar, according to which the definition becomes the paradigm of logic and the *a priori*, truths being ultimately found and tested in an extra-formal world of practice, is developed by Mr. Lewis. In pursuance of the view that definitions (construed as essentially nominal) furnish the model for the constructions of logic, Mr. Lewis offers a theory of "strict implication" as the "proper" meaning of implication. "*P* strictly implies *q*" means for him that it is impossible (self-contradictory) that *p* should be true and *q* false. Thus "this is physical" strictly implies or necessitates that "this has mass" in the sense that "it is impossible that this should be physical, yet should not have mass."⁴ At first sight this may look like a real extension of our knowledge, like a description involving insight and objective reference as to the structure of certain antecedently genuine, extra-organic objects. On

³ *Scepticism and Animal Faith*, pp. 262-263.

⁴ "It is an *a priori* principle that physical things must have mass." C. I. Lewis, *Mind and the World Order*, p. 26.

closer inspection, we are assured, however, such a statement turns out to be no more than an analytic, conventional tautology, a mere definition—whether partial or complete is not made clear—*nominal* in Mill's sense of being "a proposition declaratory of the meaning of a word," and not at all "essential" in Aristotle's sense of definition. What the implication amounts to is simply acquiescence in a convention which found it convenient to shape the first symbol so that in the language habits of a group it came to be invariably associated with, or to contain, the meaning of the other. And for the benefit of those to whom there may seem something a little satirical about this latest pronouncement that logical structure is a humanistic frame-up, the verbal habits of certain cliques within a narrow biological group, it is importantly announced that here we have "something not dictated by experience," something "necessarily true" in the sense that it is impossible of falsification. Possibly the tender-minded may be consoled to hear that "if experience were other than it is, the definition and its corresponding classification might be inconvenient, useless, or fantastic, but it could not be false."⁵ Yet they should not overlook the fact that this is simply saying in a round-about way that, since the post-Newtonian scientific world chose to define body as what has mass, and since definitions are merely verbal conveniences or agreements for the substitution of symbols, of course "nothing future experience can reveal will falsify"⁶ them—or the explicates that follow from their assigned meanings—for the reason that they never said anything about the universe or the facts of nature anyway. Although we can not be sure, following Mr. Lewis, that all physical objects discovered in the future will have mass, we can none the less be certain that, if something is found without mass, it will not be *called* physical. For if imponderable objects should finally attain scientific status as recognized phenomena, science would simply allow the old definition of physical (together with other Newtonian conceptions that had grown inconvenient) to fall into disuse, replacing them by more useful verbal correlations.⁷ Definitions then,

⁵ *Op. cit.*, p. 240.

⁶ *Ibid.*, p. 212.

⁷ The justification of my previous interpretation of Mr. Lewis's view of logic on the analogy of the dictionary seems fairly indisputable. For definitions are what dictionaries are made of, and "the paradigm of the *a priori* is the definition" (*Ibid.*, p. 239). Moreover, both dictionaries and logics are in his opinion circular, analytic, and tautologous. In their recent *Symbolic Logic* (pp. 211-212) Lewis and Langford remark: "It is a very important fact that every law of logic has this 'tautological' character. The source of this necessary truth is in definitions, arbitrarily assigned. Thus the tautology of any law of logic is merely a special case of the general principle that what is true by definition can not conceivably be false. . . . The facts which the principles of logic state are simply facts of our meanings in the use of language."

for Mr. Lewis, are simply selected and replaced; there can be no question of their ever becoming false, since they are mere agreements of usage to assign meanings to words, and never say anything about the world.

One of the chief difficulties to be met in disposing of the *a priori* as verbal, conventional, and tautological, and in establishing the pragmatic criteria of truth, is of course to account for consistency and its tests. For the criteria of consistency (the so-called laws of thought, reaffirmation through denial, *reductio ad absurdum*, etc.) have been generally held to enjoy logical necessity in a sense other than that of mere conventional agreement in the use of symbols and, while depending on formal grounds alone, have been thought to furnish ultimate tests of truth. Faced with this problem, Mr. Lewis, though recognizing that logic is concerned with consistency and its tests, nevertheless takes the stand that these tests are "methodological"⁸ only and have nothing to do with truth. Even the formal necessity which logic seems to enjoy has its source in definition, while for him the tautologies that are logical laws at bottom express apparently only voluntary agreement to *assert what we assert* and to abide by our chosen meanings in the use of language. Yet this simple conclusion is obscured from the reader of Mr. Lewis's logical

⁸ *Mind and the World Order*. "Every good or correct logic will be such that its principles are undeniable without contradiction" (p. 208). "The test of self-criticism [reaffirmation through denial] or circularity is a valuable test . . . of logic. . . . It is not a test of truth, however; it is a test of . . . methodological consistency. The error of taking self-criticism to be a test of logical truth lies in overlooking the fact that a thoroughly false logic may still possess this merely methodological consistency" (p. 210). "The ultimate criteria of the laws of logic are pragmatic. . . . Genuine issues of logic are those which stand above such questions of the merely self-critical integrity of the logical system; . . . they can not be determined . . . except on pragmatic grounds of human bent and intellectual convenience" (pp. 247-248).

In an effort to show that the internal consistency of a system is no evidence of its truth, Mr. Lewis discusses here (pp. 207 f) the possibility of developing a "bad logic" by using "bad logical premises," but "good logical reasoning." As an instance, he suggests that we take the contradictory of the law of contradiction as a premise in the form "*X is A and X is not A*," and draw an inference from it. Now if we are really clever, according to Mr. Lewis, we will, consistently with the premise, refuse to take any step that reintroduces the law as a step in the reasoning; and hence we shall never get caught in an inconsistency. What he fails to notice sufficiently, however, is that in the original premise which denies the law of contradiction, we presuppose its validity (thus appealing to a more fundamental logic), i.e., that *X* means *X* and not non-*X*, that *A* means *A* where it occurs and not non-*A*, that "is" means "is," in short, that no term is both itself and not-itself at a given point. Hence this "badness" of the original premise, which consists in its inherent inconsistency with the principle in accord with which it is assumed, must infect the system with inconsistency and be precisely what makes it a "false" logic.

discussions by his continual use of the term "truth,"—as well as by the ambiguity of his employment of it to mean sometimes (1) agreement with a factual complex, sometimes (2) formal validity, or again (3) pragmatic convenience. Thus in his logic of strict implication, Mr. Lewis (despite his criticism of truth-value systems) constantly uses "true" and "false" along with the values of "self-consistency" and "necessity," seeming thereby to retain the conception of truth as meaning agreement with fact; e.g., " p strictly implies q " in the sense that it may be known from the import of p and q that it is impossible under any circumstances that p should be true and q false—to fact. Yet if logic as logic is only concerned with self-consistency, definitions, tautologies, it would seem to have nothing to do with truth as a value involving anything outside the symbolic system itself.

Now it seems to me that logicians are brought to a strange pass when they are asked to talk continually about truth, to assert implications between true propositions, yet at the same time to recognize that their formal systems as systems need have no connection with truth. For my part I hold that questions of pragmatic utility and agreement with fact are irrelevant to logic, since logic is essentially concerned (as is shown in the tests for consistency, etc.) with formal validity; which concern is in my eyes the same as preoccupation with truth. In behalf of the first part of my contention, that logic deals with validity, with the operational integrity of principles which are valid on logical grounds alone, I may quote from the "truth-value" system of Mr. Russell:

It does not matter, for mathematical logic, what constitutes truth or falsehood; all that matters is that they divide propositions into two classes according to certain rules. . . . Further, we are concerned only with those combinations of propositions which are true in virtue of the rules, whether their constituent propositions are true or false.⁹

On such principles, it would seem perfectly possible to interpret a relationship between propositions as meaning: "If such and such is present, then such can not be absent," "If certain connections hold, then it is self-contradictory that they should not hold," or "If this is real, then that can not be unreal,"—without any reference to material truth. At any rate, such expressions make clear that the primary requisite for logic is faithful adherence to the rules the system has imposed upon itself, that is, operational consistency, and that the issue of the validity of the system turns upon structures and relationships which hold on formal grounds.

The real reason, for instance, why it is inconceivable that " x should be red, yet x should not be colored" is not that such a state-

⁹ *Principia Mathematica*, Vol. I, 2d ed., pp. 660-661.

ment would violate the customary usage of settled language habits, but that such an application of relations would violate the basic logical laws of contradiction and excluded middle (upon which the definitions of implication, in terms of logical multiplication and addition, rest). According to these laws, x can not be both red and not-red, but must be either the one or the other; while applying a second principle of division to the same sphere of discourse, it is equally plain that x must be either colored or not-colored, and can not be both. Assuming that we can know the relations of these bases of division to one another, it is plain that "colored" is the genus covering both "red" and part of "non-red"; while its negative "not-colored" is restricted in its range to a mere species of "not-red." Thus to state that " x is both red and *not-colored* at the same time in the same respect" is to state that x is both red and not-red, since not-colored is a species of not-red, which is to deny the law of contradiction in weakened form. It may be noted here that, although the logical interpretation of classes, propositions, etc., may require knowledge of meanings in order to state their relations properly, this does not indicate any special dependence of the formal relations upon the particular meanings involved.

In the second place, my justification for calling certain formal relations true is not only that, if we understand them we assent to them, but that their validity is the precondition of all determination of correct statements of fact. Statements of every sort are subject to the laws of logic, whose trustworthiness is held to guarantee the significance of specific declarations about the natural world. Indeed, it is hard to see how truth can be claimed for the results of the sciences, if not through the aid afforded them by logical and mathematical laws, which enables them to achieve more exact, quantitative expression of the relations of phenomena. Yet many of these tests, be it observed, can never themselves be assessed by the facts and methods of physical science for the reason that science in attempting to test them already presupposes their validity.

The principles of consistency, inference, and probability not only negatively exclude the self-contradictory, thereby telling us what can not be real (such as invertebrate-vertebrates, lobsters that are crustaceans yet not arthropods, though crustaceans belong to that phylum, or the arrangement of three objects in nine combinations), but they may also help us to analyse and delimit the alternative possibilities of a field in advance of experience. Generally whenever there is a scientific prediction, there is a probability estimation, some implied reference to a totality of possible states of affairs relative to which the actual fund of experience is held to have a certain weight. Plainly this involves an appeal to grounds. For whenever in antici-

pating events, we assume that the field of future experience has been narrowed through a clue from the past (certain events being rendered more likely and others less so), we are really judging the future by comparison with a hypothetical totality by an inverse deductive process. Yet an appeal to grounds of probability really contradicts the assumption of the basically disconnected, incalculable nature of the world; its estimations only gain credibility on the supposition of the determinate constitution, constant relations, and relevancies of objects. Although the tendency of recent science seems to be to abandon the search for invariable sequences of phenomena as laws of nature, and to turn instead to the discovery of probabilities in the correlation of events, it is a mistake to construe this as the admission of indeterminacy into nature; rather, it would seem, it should be welcomed as the abandonment of the dogmatic positivistic view of the world, and the recognition of logical relations as more fundamental than natural laws.

In conclusion, may I add a more specific word in answer to my critic. First, the phrase "breath of life" in the context in which it appeared in my previous article was not meant to be biologically construed, but was rather used in a sense in which one might say, "To die to the naturalistic standpoint is the first breath of intellectual life." My intention was not in the least to question that "abstract forms are abstractions," in Mr. Prall's phrase, or to confuse the distinction between form and matter, but to maintain that logical laws are *formal processes* which enjoy a dynamic cogency of operation which might well be denominated logical force or necessity. Here Plato and Aristotle would, I think, bear me out. As for the reference to Mr. Eaton, the original passage of the article will show, I think, that the issue was not whether the act of deduction is characterized by certain psychological limitations, a point which I should not think of denying, but the very different issue as to whether deduction is nothing but a psycho-physical activity, and thus wholly determined by the fortuitous and factual character of our biological make-up.¹⁰

¹⁰ Because of the difficulty I find in construing Mr. Wittgenstein's cryptic utterances, I hesitate to refer to him. Being a tautology is apparently necessary to being a logical truth on his view, and by a "zero-method" the propositions of logic attain truth because they "say nothing" (*Tractatus* *6.11). But why even these tautologies should be true, I can not understand. Needless to say, my objections are less with his proofs than with his presuppositions. Perhaps I may cite "more industrious logicians" in criticism of him. Mr. Langford (*Mind*, 1927, p. 342) says that "no proposition which is a tautology in the sense of Wittgenstein is a proposition certifiable on logical grounds alone,"—and therefore none would to my mind be genuine logical laws. Mr. Weiss, who quotes Mr. Langford's statement in his *Nature of Systems* (p. 33) adds that "The whole Wittgensteinian movement . . . is based on the attempt to derive *a priori* truths from matters of fact, and is best met by a little dose of Kant." To Mr. Weiss's work I am indebted at several points.

The tendency to divorce truth from formal systems by reducing logical necessity to tautology and intimating that it is only a special case of definition leads inevitably to verification by extra-formal knowledge, that is, either to a theory of tallying logical relations with factual complexes or to testing meanings by their utility in practice. Yet if, as we have maintained, logic is fundamentally true and is the science of the formal tests of truth, these attempts to interpret truth in terms of some correlation between systems and extraneous states of affairs must be rejected. Whether a Euclidean or a non-Euclidean geometry fits the facts of the physical world better according to the scale of the engineer or the astronomer may be a question of utility or of correspondence, but has nothing to do, as I see it, with the issue of the truth of the particular geometries.

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BOOK REVIEWS

Hume's Philosophy of Human Nature. JOHN LAIRD. New York: E. P. Dutton and Company. 1932. Pp. ix + 312.

Professor Laird has produced a much-needed book in this careful, thorough, competent study of the philosophical work of David Hume. He has not abused Hume, as did T. H. Green, by turning him into a foil for the exploitation of his own system; nor has he distorted Hume, as did T. H. Huxley, by picturing him as a partial and preliminary expression of his own later philosophy. Professor Laird has been both an ardent admirer and a constant student of Hume. "If I remember correctly," he writes (p. v), "there have been only four years out of the past twenty in which I did not lecture regularly upon Hume." But he has portrayed his subject with a justice that does not gloss over serious faults and with an appreciation that never turns historical analysis into partisan propaganda. His book at once becomes the most important single treatment of Hume's philosophy. It is both a book to read from cover to cover in sustained attention and a reference work to turn to on many detailed points of controversy.

Professor Laird follows in general the order of subjects that Hume adopted for the *Treatise*. After a largely biographical introduction come chapters on Hume's phenomenalism, space and time, causality, bodies and minds, scepticism, the passions, and ethics. Then the material of Hume's essays and history is used to fill in the outline Hume gave (in the introduction to the *Treatise*), but did not himself systematically develop, of the sciences that he considered de-

pendent upon the science of human nature. And a final chapter deals with the religious problems which were constantly before Hume's attention, received notice in many of his works, and found their most complete treatment in the posthumous *Dialogues*.

Throughout the book Professor Laird gives ample space to a discussion of Hume's sources, and enables his readers to gain a vivid picture of the relation between Hume's reading and Hume's writing. The sources fall roughly into three groups,—(1) the ancient classics, Cicero preëminently, but also Lucretius, Longinus, Virgil, and Terence; (2) recent French authors, here Bayle preëminently, through whom came much of Hume's knowledge of minor Greek and Roman writers, also Montaigne, Malebranche, the *Port Royal Logic*, Voltaire; and (3) English writers, Locke and Berkeley of course, as frequent mention in Hume's writings suffices to show, and Shaftesbury, Hutcheson, and Butler, William Law, Mandeville, Samuel Clarke, Dodwell, Anthony Collins, etc. One can fairly see Hume's mind at work, influenced and attracted and repelled by these and other intellectual and literary forces of his eighteenth-century world.

In commenting on his repeated study and teaching of Hume, Professor Laird writes: "Every year that I return to him, I find that I have misunderstood him on some points, and neglected the subtlety of his views on many." This is not, in all probability, an unusual experience for even the closest and most persistent readers of the *Treatise*. The reason is not far to seek: it is the presence in Hume's writings (sometimes in crucial passages) of equivocal terms and phrases. Often alternative meanings for one equivocal term or phrase will involve big differences in the interpretation of other doubtful passages. And so any critic will always find it difficult to reach a well-rounded estimate of Hume's total significance or even a final analysis of any of his more involved theories, such as his theory of the nature of causation. Professor Laird notes many of Hume's equivocations, and he often gives a telling account of their origin in and pertinence to the currents of eighteenth-century controversy. One suspects that he has considered and already rejected many a criticism that might be brought against his book. But it is tempting to press some such points, even if they amount to no more than the occasion for some further discussion that Professor Laird may later make upon Hume.

Hume's treatment of causation is, in Professor Laird's as in other earlier critics' opinion, "his greatest contribution to theoretical philosophy" (p. 84). And Professor Laird's chapter on that contribution is one of the most penetrating sections of his book. It seems to me both to excel any other analysis I have seen of Hume's theories of causation and to fail to note certain elements in those

theories. One respect in which it excels is in making quite clear that the idea of causation was not for Hume merely an unfounded idea or fiction. This idea, like any other idea, may be and often is abused; but it also, again like any other idea, goes back to and is derived from an antecedent impression. So far from teaching that the idea was utterly groundless (as many readers of Hume have taken him to assert), Hume pursued through to a successful conclusion his hunt for the impression from which the idea comes. And he found this impression (as Professor Laird shows) in the "original" feeling of necessitation in our own minds. This feeling is a genuine and empirically discoverable fact, even if it is an "impression of reflection," instead of being, as has usually been supposed by Hume's predecessors, a primary datum of sense (*cf.* chapter IV, *passim*, but especially p. 128). Thus we have, according to Hume's explicit teaching, an impression of causation every time we experience the feeling of necessitation in our minds. We may not have an impression of causation or necessary connection among the impressions conveyed to us by the senses, but we do experience causation directly in an impression of reflection, the occasion of which in us Hume takes the trouble to expound at length. The idea of causation is often applied too facilely and too carelessly to situations where experience does not warrant us to apply it. Yet in Hume's very meticulous empirical critique of the idea we are shown its solid basis in our own experience.

So far I follow Professor Laird eagerly. But now I begin to want to press a further point which he fails to make and with which certain expressions show him to be in disagreement. For example I puzzle over the statement with which he introduces his discussion of Hume's rules by which to judge of causes and effects. He writes: "Hume prefaced his account of these 'Rules by which to judge of causes and effects' by the curious remark that because '*a priori* any thing may cause any thing' 'it may be proper to fix some general rules by which we may know when causes really are so'" (p. 139). Why does Professor Laird regard this remark as a *curious* one for Hume to make? Because—if I read him correctly—he takes Hume to mean that no objects are causally connected until uniformity of experience produces in us a certain habit or expectation and thus gives rise to a feeling of necessitation in our minds. Indeed he explicitly asserts that Hume was guilty of a fallacy in saying that "the repetition *produced* the new feeling of determination" instead of merely being associated with it in an inexplicable way (p. 130). Now there are some passages in Hume, which, considered apart from the context of polemical reference which runs throughout the whole first book of the *Treatise*, are usually so read as to substantiate this

interpretation. But they often ought not to be so read, and there are others which can not possibly be so read at all. Hume's assertions, like those of many another philosophical writer, must be understood in the light of what current supposition is thereby denied. What Hume was constantly alert to deny we shall consider presently. But we should first of all realize that no inconsistency is involved in asserting both that a certain impression of reflection is the only source of our idea of necessary connection, and that there is a causal order independent of and antecedent to our minds. Hume, as Professor Laird shows, held the former of these views. He also, as I would contend, held the latter too. I grant that in extreme passages Hume seems to dissolve all beliefs into the uncertainty of utter scepticism. Ordinarily, however, Hume implied and at times he explicitly asserted a causal order that we discover and do not invent. And if this be so, not simply does Hume commit no fallacy in saying that "the repetition *produced* the new feeling of determination," but also he is well advised (since the *impressions* of necessitation are, in his opinion, only "in our own minds") to draw up rules to safeguard our application of the *idea* of causes and effects to other sequences of nature. Not by observing causal connections between objects about us (for Hume, whether rightly or wrongly, denied the possibility of such observation), but by applying to the examination of the sequences of objects certain rules based on a study of the conditions under which feelings of necessitation arise "in our own minds," --only so do we ever know, in Hume's own words, when supposed causes and effects "really" are so.

What Hume was constantly alert to deny is seen in such a passage as the following. "According to the precedent doctrine, there are no objects, which by the mere survey, without consulting experience, we can determine to be the causes of any other" (Selby-Bigge edition of the *Treatise*, p. 173). The important phrase for the present discussion is *by the mere survey, without consulting experience*. Hume is obviously combatting the Cartesian tradition. Professor Laird recognizes that Hume stands in the Newtonian tradition and that his work may be considered as the carrying out of Newtonian principles in "moral subjects" (p. 20). But in Hume's day to be a Newtonian was on many points to be an opponent of Cartesianism.¹ Cartesianism meant (in England at least, whether

¹ Professor Laird says in one passage (p. 153) that Hume speaks "in the usual Cartesian-Newtonian vein." This remark is true; for he is considering Hume's comments on the "ancients." But Cartesianism and Newtonianism were at swords' points on many issues. And though this conflict was echoing all through the decade when Hume was writing, Professor Laird does not seem to take it into account.

or not Descartes himself was fairly interpreted at this point) that we can anticipate, supplement, or go beyond experience by means of "clear and distinct ideas." Newtonianism meant the rejection of such "rationalism" (cf. Newton's celebrated remark "Non fingo hypotheses") and the acceptance of the experimental method as the sole source of genuine knowledge. Hume expressed a clear Newtonianism in the *Enquiry* in the oft-quoted closing passage about "abstract" or *a priori* knowledge of "relations of ideas" and "experimental" knowledge of "matters of fact"; and he used, as Professor Laird points out, much the same language in the *Treatise* (p. 52).

The significance of the underlying current of polemic in Hume's writing is more apparent if his position is compared with that of some of his predecessors. We need not here go back to the Cambridge Platonists who were more Cartesian than any other group in England. We need merely to recur to John Locke. While rejecting innate ideas and *a priori* knowledge of matters of fact, he yet remained in some ways strongly under Descartes's influence. Important for our present discussion is his retention of the rationalistic ideal of knowledge even where he most explicitly pronounced the realization of that ideal utterly impossible. He wrote in the *Essay* (Book IV, chapter III, section 25): "I doubt not but if we could discover the figure, size, texture, and motion of the minute, constituent parts of any two bodies, we should know without trial several of their operations one upon another; as we do now the properties of a square or a triangle." *Without trial!* This is sheer Cartesianism, even if mitigated by scepticism as to its practical value. And if Locke retained so much of Cartesian influence, Hume's anti-Cartesian polemic could hardly have been pointless a half century later in a country where Locke for a time was almost authoritative. Neglecting other teachings of Locke and confining our judgment to this point, we may fairly say that Locke was a disciplined Cartesian or a reluctant Newtonian. He was a disciplined Cartesian because he was not carried away by his wishes and never wearied of proclaiming that the rationalistic ideal was quite unattainable in the case of substances or "real existence." But he was a reluctant Newtonian, because he continued to crave a kind of *a priori* knowledge that Cartesianism claimed to offer. Hume on the other hand was an eager and militant Newtonian; and though a close student of Locke's *Essay*, he was keenly aware of the full implications of accepting the "experimental method." His Newtonianism was, so to speak, self-conscious.² He fought Cartesianism both because he thought it untrue, and because he saw how, under its cover, men were led to

² It is tempting to say that Hume was more Newtonian than Newton; for in the *Dialogues* he disclosed the implications of the "experimental method" for a subject-matter to which piety restrained Newton from applying it.

attribute their own subjective biases to the independent "operations of nature." Rationalism is a bad philosophy, he maintained, not merely because (as Locke had been led to grant) our ideas are not reliable guides to a knowledge of what lies beyond experience, but also and more importantly because *relations* between *facts* are not akin to *connections* between *ideas*.

With this reminder of the controversial background and polemical character of Hume's treatment of causation I return to my difference with Professor Laird. That difference, so far as I can make out, is due to, or at least is reflected in, a difference of interpretation of some of Hume's equivocal phrases. Take for example the statement that "*a priori* any thing may cause any thing," a statement which Professor Laird finds a "curious" premise for concluding that we need rules by which to know when causes really are so. This phrase occurs substantially on page 173 of the *Treatise* (Selby-Bigge edition), but exactly so on page 247, where it stands in a context that is worth quoting. "Now as all objects, which are not contrary, are susceptible to a constant conjunction, and as no real objects are contrary; I have inferred from these principles, that to consider the matter *a priori*, any thing may produce any thing, and that we shall never discover a reason, why any object may or may not be the cause of any other." No real object, i.e., no existent object, is contrary to another, because contrariness is a matter of logical opposition and is found only between ideas. So far as *a priori* considerations go, that is, so far as *logic* goes, any object may be causally related to any other; a cause does not *imply* its effect. Hence we can never give reasons why a cause produces the effect it does produce and does not produce some effect it does not produce, just as (to generalize our statement) we can never give reasons why things are as they are and are not as they are not. We can never give reasons in such matters, because actual existences and actual relations between existences are not like ideas and connections between ideas. Existence is, as we sometimes say, a "brute" fact; it is something to accept on empirical evidence, rather than something to be logically accounted for. Or, to put Hume into terms of his own eighteenth-century controversy, Newton is right and Descartes is wrong.

We should notice that in this passage Hume does *not* say that certain objects are not "really" causes; he does *not* assert "so absurd a proposition as *that anything might arise without a cause*" (quoted by Laird, p. 96, from a letter in Burton's *Life of Hume*); he does *not* say that no objects are causes until we so regard them or associate them with what we are accustomed to regard as their effects. The passage is wholly consistent with belief in a causal order "independent of and antecedent to the operations of the understanding."

It is wholly consistent with an attempt "to fix some general rules by which we may know when causes really are so." In other words the causal relation is one of the philosophical relations "such as may be changed without any change in the ideas" instead of being "such as depend entirely on the ideas" (to quote from the opening page of Hume's long treatment of causation in Part III of Book I of the *Treatise*).

Or take Hume's statements that all events are "loose and separate," that "objects have no discoverable connection together," and that we should not suppose "any real intelligible connection" between objects. Events are *not* loose and separate in any sense opposed to a recognition that "the operations of external bodies are necessary"; they are loose and separate relatively to logical or rational considerations. There is no "intelligible" connection, because intelligibility is "a quality which can only belong to the mind." And Hume can even say, consistently with a belief in an objective causal order, that "objects have no discoverable connection together," because he is using the term "connection" in a highly technical sense. A connection is a bond which enables us to draw an inference from one object to the other in advance of experience (cf. *Treatise*, p. 103); it is not any and every relationship. Indeed Hume takes precaution (usually, not always; for his writing was inexact) to contrast *connections* and *relations*. For instance he writes (p. 166): "The simple view of any two objects or actions, however related, can never give us any idea of power, or of a connection betwixt them." He here explicitly asserts that objects may be *related* without giving any evidence of being *connected*. To put the point in words relevant to the present discussion, the discovery that one object or action is cause of another can never enable us to view that relationship as an instance of logical implication such as we find at times between one idea and another.

Apart from such internal evidence for the above interpretation of Hume's language as is given by a reading of the *Treatise*, we may find further corroboration in parallel usage in writings with which Hume is known to have been familiar. Hume is not capricious (though he is careless) in his language; and if at times (as in his usage of the term "idea") he departs from contemporary linguistic practice, he tells his readers so. In using *relation* and *connection* in a technical way for contrasted meanings, he is only following the example of Locke whose *Essay* was well known to all readers of philosophical literature in his day. Locke's *Essay* contains passages such as the following: "There is no conceivable connection" between the primary qualities of things and the ideas of their secondary quali-

ties in our minds (Book IV, chapter III, section 13); we must reconcile ourselves to an irredeemable ignorance of the "necessary connection" of the qualities and powers of bodies with one another (*ibid.*, section 16); we must acknowledge that we can find no "necessary connection" between even one moment and another moment in the existence of a man (Book IV, chapter II, section 9). Now Locke surely will not be interpreted as denying that we discover and know causal relationships in nature, even though he denies our ability to discover and know necessary connections. Why then should Hume not be taken to be using terms in the same way, especially in the light of the pertinence of his discussion both to Locke's position and to the vestiges of Cartesianism which still lingered in his day?

Professor Laird speaks of Hume's reiteration that all events are loose and separate as "his official theory" and asserts that it is incompatible with Hume's recognition of a "systematic interconnection in nature" (p. 131). Both parts of this statement are sound; but they are not sound, I believe, in the sense in which Professor Laird takes them. To say that all events in nature are loose and separate is not to say that no fixed and uniform relations exist until habits and associations arise "in our own minds"; rather it is a Humian way of saying that natural relationships are not necessary connections such as Cartesianism took them to be. And the remark is incompatible with any recognition of interconnections in nature, but not with belief in a causal order "independent of and antecedent to the operations of the understanding."³ In the light of this interpretation of Hume I see no reason for not ascribing to Hume pretty much (not exactly, because Hume denied the experience of "agency") the "tenable theory" of causation that Professor Laird outlines (next to last paragraph, p. 103) but supposes would be "nonsense" to Hume!

I have extended my discussion of certain elements in Hume's theories of causation to a great length. I may seem thereby to be attacking Professor Laird's treatment of those theories more than I mean to do. I repeat that I find his treatment the best I have ever seen. And even on points where I attack his interpretation I must

³ In the opening pages of Book III of the *Treatise* Hume asserts emphatically that he believes in uniform and necessary interconnections in nature. Perhaps Professor Laird is thinking of these pages. But as far as I can see, these pages enforce my criticism of Professor Laird. Hume is obviously inconsistent somewhere. But the inconsistency is, I think, one of language only. When Hume asserts belief in interconnections and necessity in nature in Book III of the *Treatise* he is no longer dealing with issues such as he dealt with in Book I, Part III; rather he is attacking what he considers the false supposition that men's passions and ideas are a realm of chance where causation does not prevail. Thus, while Hume's language is amazingly careless here, he is only re-expressing what I take to be his position on causation in Book I, Part III.

now add that Hume occasionally justifies him. Though the burden of Hume's discussion (and especially in the definitive sections of Part III of Book I of the *Treatise*) is in my opinion what I have insisted on above, there are other passages of different tenor. Hume writes at times in terms of a subjectivism akin to Locke's and in terms of a sensationalistic atomism. Then all impressions and ideas are loose and separate in the sense that they contain in themselves no structure; most relations are set up as the result of mental associations; and causation therefore occurs in ourselves only and not in objects apart from us. (It was this strain in Hume that drew forth T. H. Green's reply.) Professor Laird holds that in these passages Hume is guilty of "an unconscious betrayal of pure phenomenalism" such as he normally or "officially" maintains (p. 27). I think that I would regard Hume's betrayal of phenomenalism as more frequent and more insidious than does Professor Laird. But I need not argue that point here; for I do not find such betrayals at all conspicuous in Part III of Book I of the *Treatise* where Hume's definitive discussion of causation is of course to be found. Hence the passages which sustain Professor Laird in accusing Hume of "fallacy" or "inconsistency" in asserting belief in a causal order independent of and antecedent to the operations of the understanding are not passages in which Hume expresses his "official" position.

I should add in closing that Professor Laird gives admirable analyses of Hume's treatment of the ancient and the modern philosophy (pp. 151-156), of Hume's ethics (chapter VIII), and of Hume's historical writings (pp. 261-273). And his closing chapter gives so completely and so fairly all the evidence in regard to Hume's beliefs on religious subjects, that it is hard to see how any one could improve on it.

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Sociologie. Partie de Philosophie. ERNEST ROGUIN. Lausanne: Charles Peche. 1928-1929. 3 vols. Pp. 658; 749; 766.

The author of these three gigantic tomes is an Emeritus Professor of Law at the University of Lausanne. He is also an honorary member of the Institut de Droit International. He has contributed some important volumes to the science of Jurisprudence, notably, *La Science Juridique Pure*, in 3 volumes. For one reason or another, however, he has decided to devote the remainder of his life to an elaboration of a system of sociology, but he has found it necessary first to preface his Sociology proper with five volumes on Philosophy (we are here reviewing the first three volumes). Like Voltaire's *Ingénu*, Monsieur Roguin is of a very independent turn of mind.

Frankly to express everything we think, constitutes one of the consolations of our old age. Happily, nothing forces us to refrain from indulging in this satisfaction. No longer a professor, a bachelor, outside all academies, we are free from the necessity of taking into account other people's opinions and sentiments, and nothing kept us from attacking the great idol of the period (Bergson), whom we nevertheless greatly respect. Of course our frankness is not without its inconveniences; we can not expect, for our person, prizes and distinctions; nor for our books, the added publicity which results from the favor of Academies and important people who speak in their name. What is more, we have brought upon ourselves the animosity and silence of a kind of clique of Jews and Protestants who seem to have a foothold everywhere. Let us console ourselves in our intellectual isolation, broken, now and then, by rare friends and faithful partisans. [*Avant-propos*, p. vii, Vol. III.]

It seems to the present reviewer that there are certain weaknesses in an intellectual production of something like two thousand closely printed pages, when they are filled with information taken from secondary sources, like Robin's *History of Greek Philosophy*; Fouillée's *History of Modern Philosophy*; Ruggiero's *History of Contemporary Philosophy*. No serious scholar, whatever the accident of his race, religion, or bank-account, can very well become enthusiastic over the output. Furthermore, as the author himself tells us, "it will suffice to glance through our work in order to recognize that it resembles no other on the same subject. . . . Without ourself expressing a personal opinion, we have maintained that only two metaphysical systems, *materialism* and *religious spiritualism* remained standing after the combat [of analyzing them]; but that neither one of these was capable of overcoming its opponent" (p. v, Vol. III). In other words, Monsieur Roguin plays the part of an objective interpreter. Unfortunately, the exposition is very rambling and interspersed too often with personal polemics.

The present reviewer would certainly be inclined to look with unqualified sympathy upon a work which attempted to deal with philosophy as a sociological phenomenon, as an aspect of culture. This is what the present volumes purport to do. Unfortunately, however, the promise is not at all fulfilled. Perhaps in forthcoming volumes the unity of the entire system will become more apparent.

MOSES J. ARONSON.

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A Philosophy of Reality. E. L. YOUNG. Manchester: Manchester University Press. 1930. Pp. ix + 266.

According to the writer "The Business of Philosophy is to explain the Universe," and this phrase is interpreted in the classical sense of superposing a cosmic scheme of relations upon the material structures of the various sciences and pursuits devised by man as partial explanations. Thus from the outset the book is doomed to a

type of broad, breathless generality. The methodological dangers inherent in any such extremely generalized approach are clearly displayed in much of the subsequent chapters, especially those in which the domains of the special sciences are invaded. In the chapter on time, for instance, the proverbial distinction between subjective and objective time is made and clung to without any apparent recognition of the searching analysis into the physical meaning of time that has recently been made, e.g., of the type of Lindemann's *Physical Significance of the Quantum Theory*. The most successful portion of *A Philosophy of Reality* is the last, "Essential Values," though here again the work is vitiated by an attempt to discuss the classical verities in terms of cytology and "electrons."

RUDOLF KAGEY.

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The Approach to Philosophy. J. F. WOLFENDEN. London: Edward Arnold. 1932. Pp. 236.

Composed originally as an attempt to minimize "the difficulties and problems which trouble beginners in those Final Honour Schools wherein the study of philosophy is included," *The Approach to Philosophy* presents a careful analysis of many of the recurrent problems of philosophy in their classical contexts. Philosophy is considered in the traditional bifurcate way as "critical" and "constructive." The "single unhypothetical fact" which warrants philosophy's position "as critic of science" is to be found in "consciousness, our awareness of mind, or the subject-object relation" (p. 231). And on this basis a metaphysic similar (even in nomenclature) to that of *Appearance and Reality* is erected. The easy discursive style and leisurely progress of the volume recommend it as an introductory text.

RUDOLF KAGEY.

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NEW YORK UNIVERSITY.

The Rôle of Logical Form in Propositions about Existence. STANLEY B. REID. Berkeley: University of California Press. 1931. Pp. 75.

The thesis presented is proposed partially as follows: "The proposition has its characteristic composition resolvable into a substantive and the adjective. The significance of these categories is exhausted in the unity which they compose, namely, the proposition. And they are not separated as two terms in relation are ordinarily separable or distinct, but, which is very different, they are merely distinguishable as the converse aspects of the connection called by Johnson, the characterizing tie. . . ." The position thus briefly

stated is amplified and defended by a critical examination of the logics of Johnson and Bradley.

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JOURNALS AND NEW BOOKS

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NOTES AND NEWS

The program of the lectures for 1933 of the Philosophical Union of the University of California on the general subject of "Possibility" is as follows:

January 20.	What Makes Possibility Possible?	G. P. Adams
February 3.	Possibility and Identity	Ralph Church
February 17.	The Ontological Status of Possibility ..	V. F. Lenzen
March 3.	Possibility and Context	J. Loewenberg
March 17.	The Possible and the Actual	E. W. Strong
April 7.	The Realms of Possibility	D. S. Mackay
April 14.	Possibility and Significance	Paul Marhenke
April 21.	A Contextualistic Theory of Possibility	S. C. Pepper
April 28.	Possibility and Pluralism	William Savery

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXIX. No. 25. December 8, 1932.

The Missing Link in Epistemology. C. A. STRONG.
Tangling Cognition. FREDERICK J. E. WOODBRIDGE.
Book Reviews. Journals and New Books. Notes and News.

Volume XXIX. No. 26. December 22, 1932.

The Early Draft of Locke's Essay. STERLING P. LAMPRECHT.
Reflections on Infinity. RALPH B. WINN.
Book Reviews. Journals and New Books. Notes and News. Index
for Volume XXIX.

Volume XXX. No. 1. January 5, 1933.

On the Existence of a Necessary Being. JEROME GASPARD.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 2. January 19, 1933.

Dr. Whitehead on Perception. DANIEL CORY.
The Development of James's Pragmatism Prior to 1879. MAURICE BAUM.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 3. February 2, 1933.

Word-Portraiture. VIRGIL C. ALDRICH.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 4. February 16, 1933.

Non-Being. RAPHAEL DEMOS.
Report of the Ninth Annual Meeting of the Pacific Division of the
American Philosophical Association. DONALD C. WILLIAMS.
Book Reviews. Journals and New Books. Notes and News.

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THE JOURNAL OF PHILOSOPHY

IMMEDIATE EMPIRICISM AND UNITY

WHEN Hume's analysis convicted the sense empiricism of science of subjectivity, it began to appear how difficult a matter empiricism is: how difficult it is to observe *the given*; and Hume's scepticism consisted in the belief that the situation of the human mind precluded such an end. Rousseau at the same time was revolting from the view of the Enlightenment that it is all very easy and entirely sufficient to grasp reality given to sense and reason. His passionate nature flew to a lively consciousness of the importance of feeling—of inward urgency, in the history of mankind. He was carried at once to the view that this deeper urgency of feeling, if found really as *given*, would also be the Good and that it would thus appear in primitive races, the present lamentable condition of mankind being due to the fact that *the given* had been vitiated by "culture." His slogan "back to nature" was therefore a call back to *the given*. It was a call to a deeper empiricism. Rousseau himself, however, when he wrote the *Social Contract*, had become aware that "the given" and "the ultimate" are not synonymous. But his importance lies in his rendering the urgency of thought—a phenomenon evident in philosophy and science from the beginning—vaguely but indubitably a self-conscious principle. He revealed philosophy to itself as the self-awareness of man's spiritual urgency, and set it taking up its problems anew from this viewpoint.

Of course one can not say that this was wholly due to Rousseau. Certainly after Hume's work, except where philosophy was to be retrograde, a new basis was inevitable anyway. To make new analysis of the knowledge relation or of the concept of substance or of causation upon the same basis as had Locke, Berkeley, and Hume was scarcely possible. To act like Reed, for instance, as if these men had never written, was not much service to philosophic advance. If philosophy had learned from the past, though it were at once to occupy itself again with old problems, it must go upon new ground; and it is the new ground that is important. With the failure of sense empiricism, the time was ripe for the deeper empiricism of self-observed conation. The movement toward this began as philosophy's own age-long urgency became lighted up with self-consciousness. The

self-consciousness was and is more or less vague and incomplete, but it was often, as in Fichte, tremendously passionate; and it provided the new basis after Hume's destruction of the old.

The important consideration, however, was not the immediate achievement on this new basis of an adequate theory of knowledge, or of an adequate conception of causality or of substance. That quest has been and remains a natural error retarding insight. Instead, the important thing was as to how far this new line of advance was fitted to lead to a genuine empiricism, that is, to an immediate observation of *the given* which alone is the basis of knowledge of the ultimate, or perhaps, progressing, reality.

Now it has at last become manifest that this question can be answered only when it is made clear that there are two lines, and not merely one, upon which urgency or conation can be observed and that there is a relation between these two lines which must be analyzed with clearness before we can say: "We have here *the given* upon which to achieve a philosophic forecast of, or foresight into, total or ultimate experience." *The given* will be observed only in the completed self-observation of spiritual urgency; and this is perhaps the final concept of the philosophic task,—if spiritual urgency as *given* is discovered to determine an ultimate system of value. The errors of modern philosophy result from proceeding to the stock problems on one of these lines without adequate appreciation that the other is its correlative; so that an unnecessary antagonism arises.

Of these two lines of conation, one has a very lowly status so that Western philosophy has only recently, in Bergson, James, Whitehead, and others, recognized it as its own. It is that line of urgency which goes on below the level of sense perception, though not of possible awareness. Here can be directly observed the passage of process, of immediate "next-to-next-ness," or "connexity" among "actual entities" or "occasions." Professor Whitehead, re-reading Plato and other thinkers in the light of this revolutionary philosophy which rendered it openly self-observing, has shown that all had observed, in many asides, this lower level of urgency or "creativity." But the historic trend of philosophy left these curious observations by the way, never recognizing their strategic importance, and laid stress upon clear-cut conceptions. Among these latter alone, a knowledge of real and permanent substances and of causal operation among these should be gained, with the result which Hume, not without pain to his own good nature, faithfully revealed.

These clear-cut notions all issued upon a higher line, upon the level of self-consciousness, where the subject-object relation is strikingly present, the subject looking out clearly upon many objects and inviting to that naïve assumption of indubitable knowledge

which obtained in pre-Humian rationalism and sensationalism alike. Their failure lay in the fact that philosophy was not conscious of its own urgency or conative aspect. This, if it had been present, might have directed Western philosophy, as it directed ancient Eastern philosophy, to trace the source of its clear-cut forms ("name and form" of Buddhistic writings and of Upanishads) down to a lower observable level of experience—the other line mentioned above upon which urgency or conation can be observed.

It was upon the upper level that modern philosophy first became conscious of itself as urgency and much more recently, as we have said, conation upon the lower level has been observed and analyzed. What is needed is that the full import of its two poles should be grasped together. But what actually occurred in the history of thought was that, at its post-Humian revolution, philosophy first became aware of itself as spiritual urgency wholly and only upon the higher level and was altogether oblivious of the lower level of connexity or process moving creatively below the overt subject-object relation. It grasped the conception of the powerful Rousseauian background or undercurrent of the mind, but saw no way of apprehending it except by logical analysis on the overt subject-object level. Here is traced the error of all phenomenalism and transcendentalism.

Let us follow this observation out in a little more detail. Kant's revolution is most intimately comprehended when it is seen to conceive philosophy as rational urgency, in the first Critique; and as a fuller spiritual urgency in the second and third Critiques. Kant's transcendentalism, meeting Hume's *impasse*, may be regarded as a quest for what must be presupposed to explain the undeniable historical supply of man's rational urgency—of his needs in the way of scientific knowledge; and, if he thus shunted "knowledge" onto a side track in phenomenalism, his *Critique of Practical Reason* started philosophy squarely upon the road of spiritual urgency, albeit wholly upon the upper level and without piercing into the source of its clear-cut forms, but mistaking them as immediately and irreducibly given. Now what should be held in mind as most important in this connection is the outstanding phenomenon of Kant's eager intent upon *unity*, together with his failure to find the connections for that unity given to his thought and his cautious integrity which refused to fake the connexity. When philosophy became self-conscious urgency, unity passed from being merely a placid assumption as in Spinoza (or a *situation* that might be explained by an atomistic system) to be a disturbance, a painful demand. But the demand for unity is here in one who repudiates Fichte's ardent fulfillment and who persists in realism, deep-lying below the overt subject-object level, and finds a suggestion, and merely that, as to how

unity will be consummated, in the unity of the organism, and of the *feeling* of the sublime. We should not overlook the fact that Kant presents an inescapable demand for unity so independent of Fichtian and Hegelian idealism that it would have none of it. It will be maintained later in this paper that spiritual urgency as actually perceived on its two levels as we have stated, presents two inseparable poles, one of *connexity* or *process* and the other of *unity*; and it is here held to be strong evidence to this effect that, when in Kant philosophy, while still blind to the immediate perception of deeper process, became conscious of itself as spiritual urgency, the pole of unity stood out painfully.

But it was little time until the movement of modern thought rushed in Fichte's ardor beyond Kant's caution and assumed the completeness of its unity, as had often been done in the previous history of thought, however unreal it might thereby render its physical basis. In Fichte, in Schelling, in Hegel and his followers, seeking always to correct past defects, "the great tradition" in modern philosophy has been an exalted self-awareness of spiritual urgency in its inevitable unity.

But there is always another aspect to unity besides mere inclusion. There is the *connexity* of the unified multiplicity; unless an atomistic theory is to dispense both with unity and *connexity*. What renders the whole post-Kantian transcendentalism a gigantic *tour de force* is that this *connexity* is nowhere observed as *given*, but is "deduced" on the overt subject-object level of urgency and is swiftly achieved in an Absolute Knower. The deduction of the processes of nature follows of course. This was revolting to science whose actual findings discredited this over-confident Hegelianism. The movement then passed into a looser spiritualism in Germany and in France which did not claim to deduce nature from the forms of thought, yet which felt justified in referring the forms of its own spirit to nature, out of which the human spirit evolved. It sought by the broad method of analogy to outline a real world where spiritual urgency should find the arena of its fulfillment.

Meanwhile science, unable to wait upon philosophy, overlooked Hume and proceeded upon the old abstract empiricism.¹ Its method applied in biology and psychology has been determined upon finding conation itself in a state of atomism with *connexity* produced by environmental influence. The organism is preconceived as a grouping of atomistic drives or action tendencies. Urgency falls under

¹ The precise nature and the limits of this empiricism has been aptly suggested in a saying quoted by Hobhouse in *Development and Purpose*, p. 101, "Man joins and disjoins bodies; the rest nature transacts within." The deeper immediate empiricism discovers nature as its creative task.

the Spencerian formula as these atomistic urges are mechanically adapted to each other by external means.

But a movement of deeper, more concrete, empiricism, based upon the self-observation of conation upon its lower level, was not long in starting once Kant had stated the primacy of the will. It is at this point that empiricism in Western philosophy is, in Schopenhauer, immediately indebted to the philosophy of process in the East. A method of thought there which was nearer to primitive ingenuousness (or immediate empiricism) here influenced the West, bringing it to a direct observation below the level of its sophistications. Schopenhauer replaced Kant's moral urgency (where Kant found mind in immediate touch with reality) with urgency in general, conation as such, blind will, itself reality, underlying all. Psychologists began to look below the overt subject-object level of sense and intellect, and to observe the process of feeling and conation. It began to uncover the arrival of knowledge itself, going below its subject-object relation, and to observe its forms, as Indian philosophy has done, arising from the deeper level of conation and as instruments of life's ends. Indeed in certain eminent scientists of philosophic mind, such as Maxwell, science itself had begun to yield its characteristic hardness of line and to find its axioms as postulates—its very system of knowledge an economy to fulfill the urgency of life. This movement of more immediate empiricism could not be deluded with the spurious connexity supplied by the transcendentalists and phenomenologists for their unified multiplicity from a surface-analysis of knowledge. But when this more profound empiricism, in William James, for perhaps its outstanding instance, repudiated Unity as Absolute Knower and took umbrage at the idealistic logical determinism that went with it, it did not confine itself to this but threw out the baby with the bath, repudiating unity as such and becoming blinded to its presence in the given as the inevitable opposite pole to process.²

We feel it then an accident in the history of empiricism which the time is ripe for setting to rights, that when it became immediate and radical, it had an animus derived from conflict against unities of all kinds, even though discovered upon its own basis of the immediately given. It would have made a difference if James, for instance, had not had his broad intellectual hospitality halting at this point. The given basis, immediately observed, within which the subject-object relation arose at the behest of the spirit, would not have appeared as a "neutral entity,"³ rendering the surface-prob-

² Cf. a similar protest by Prof. C. V. Tower in this JOURNAL, Vol. XXVIII, p. 589.

³ Cf. Whitehead, *Process and Reality*, p. 65, "Feelings effect transition into subjectivity. They replace the 'neutral stuff' of certain realistic philosophers."

lem of knowledge regulative of philosophy once more. But remaining upon the point of view of spiritual urgency from which the entire modern advance has been made, it would find the basis from which knowledge has been directly observed to rise to be the *unity* of, and not the *neutral* to, the physical and the mental.⁴

When observed with unprejudiced candor, unity and process are poles always mutually involved. This appears in physical, biological, or psychological process—in urgency at any of its stages. Only the historic animus against the repressive universals of authority or logical absolutes that close out human effects, could have excluded so patent an actuality from earnest and candid minds. Even when process is conceived mechanically as the mutual impulsion of atoms, the very observation that the atoms remain together in a *world*, and do not move apart into infinity, requires some principle of unity. Thus Epicurus, long before the famous experiment at the leaning tower, stated the principle that all bodies of whatever weights shall fall across empty space at *uniform* speed.⁵ He was providing for the obvious unity of the world. This obvious fact of a world that holds together, if its meaning had been apprehended, would have warned men long ago that physics itself must find its basis in organism. In our day when old absolutes of time, space, and fixed ether escape us, the theory called “of relativity” provides for a *world* by entailing a constant, i.e., the velocity of light, for the special theory and the “separation of events” for the general theory. They must provide for the obvious fact that process is in a *universe*. The poles remain: relativity and constancy, process and unity. At the biological level the organism is defined in terms of these two poles. The organism is a unity of parts and conation is its manifestation in disturbance or incompleteness. At the spiritual level, religion, philosophy, art, science, manifest in every turn of their history their inevitable determination upon unity; and every system of dogma, every inclusive hypothesis, seeks to reveal or suggest the connections between its parts. We have suggested above that the philosophy of Immanuel Kant most strikingly presents the force of this principle of unity because his deep and faithful mind left his life-task plainly waiting for the discovery that should render that unity complete.

Now unity is always actually discovered in its disturbed or in-

⁴ The perception of process in immediate empiricism interprets the immediate passage from subject to object to be a presentation in perception of the passage between physical and mental and therefore the unity of these. The mind-body, mind-matter-situation presents their unity as presupposed. The problem is, How? A dualism is recognized, but it is secondary. It is traced down to present moment including immediate past moment as object, a “vector” relation which, however, is experienced as a unity.

⁵ Bakewell, *Source Book of Ancient Philosophy*, p. 294.

complete form, while the major philosophic tradition persists in presenting it as absolute and finished. Chiefly for this reason perhaps the prejudice against unity *as given* has been such that the above obvious facts are excluded from bearing their part in explanation. Able and learned philosophers of recent date were thrown into amazement that one so obviously well equipped in both science and philosophy as Professor F. S. C. Northrop should write a book in high enthusiasm as he traces a common principle of unity operating at the different levels of process.

But the above deductions or more remote observations of unity are not what we have chiefly to rely upon. It is exceedingly significant that when immediate empiricism attained intuitive or non-sensuous perception of connexity or process it apprehended *unity* in the same immediate perception and thus philosophy can point to immediate perception of both poles of the given.

But though unity was at once observed with connexity by immediate empiricists they were totally unaware of the place and significance this unity must take in their own philosophy. Bergson reported the direct intuition of unity achieved after reflective intelligence had done its work, but he left this confused with the perception of connexity itself and he never apprehended in their complementary completeness these two poles of his immediate empiricism.⁶

James's immediate observation of the deeper stream of conation by non-sensuous perception revealed it not only with a "next-to-next-ness" in which immediately past thought becomes the object of present passing thought as subject; but he disclosed it also at its other pole issuing through more or less inclusive "feelings of tendency" onto the level of perception and conception. In the famous ninth chapter of his *Psychology* whose material was presented in *Mind* as early as 1884, he says after dealing with the level of "next-to-next-ness," "But there are other named states or qualities of states which are just as important and just as cognitive as they and just as unrecognized by the traditional sensationalist and intellectualist philosophers of mind. The first fails to find them at all, and the second finds their *cognitive function* but denies that anything in the way of feeling has a part in bringing it about." He then presents examples of these more or less inclusive cognitive *feelings*, and he says, "Now what I contend for and accumulate examples to show is that 'tendencies' are not only descriptions from without but that they are among the objects of the stream which is thus *aware* of them *from within* [*italics mine*] and must be in a large measure described as *feelings of tendency*." He thus has reported an immediate perception of urgency at its two poles: at one

⁶ Cf., e.g., H. Hoeffding, Lectures on Bergson, *Modern Philosophers*.

pole the connexity of process, and at the other, larger unities of feeling. By such a unity of feeling a tension is set up which psychologists are now calling a "governing propensity" or, in its reflective phase, a "determining tendency." In this, two poles or two levels of conation appear and the upper has an objective, vague as to apprehension, yet perfectly definite, since it alone will set the tension of the organism at rest. An idea or concept arises out of the tension or feeling which has the function (not of presenting a fixed copy of a real object) but of directing the conation on its level of connexity or of "causal efficacy" to attainment of its need.

But this new and exceedingly important analysis of the problem of knowledge draws James's attention, as it has that of the entire movement of thought, away from consideration of its most significant discovery to a partial and incomplete pragmatism whose regulative notion is the functional nature of concepts. Now there can be no doubt that concepts have the pragmatic function; and, for most concepts, this is their whole meaning since their fixed unity corresponds to no actuality unless perhaps for a moment in process. But this is not the case with all concepts, since unity as grasped in immediate empiricism, is a concept as well as a feeling, and it has both a subjective and an objective meaning. What has been overlooked by this movement of thought, causing it to run against its own genius into logical atomism and relativism, is that the unity represented as fixed in the concept has a reality. It is an instant of attainment in the experience of the spirit whose upper pole is inclusive unity, constantly disturbed and enriched by the actuality of process. James's own statement that the true is simply the expedient calls for a larger philosophic arena in which his pragmatism could operate, if it were not to be merely a practical method of scientific and social advance. Pragmatism is the method of immediate empiricism which reports reality as both process and unity. The true is the expedient to the ultimate unified value. The unity of value is present in *feeling* from the beginning. I have attempted to show in another place⁷ that as soon as conation, in the emergence of humanity, reached the stage of reflection, it leapt at a bound off the level of special problems to the solution of the problem of the total conservation of values. Certainly the inclusive problem of science or of philosophy has at its basis a *feeling of tendency*, which is no mere "description from without" but immediately observed "object of the stream" of spiritual urgency.

James's mind was moving as the years passed to a realization that radical empiricism was his fundamental contribution. While his pragmatism and radical empiricism appeared at first as separate

⁷ To be published in the July issue of *The Monist*, 1933.

movements of thought, he often affirmed that the former was the method of the latter. Pragmatism, as the larger application James gave it in the *Will to Believe* suggests, is the method of fulfilling a need of the spirit's utmost scope and immediate empiricism perceived a unity in spiritual urgency to which no limit can be set without recourse to dogmatism.

BRUCE W. BROTHERSTON.

TUFTS COLLEGE.

REPORT OF THE THIRTY-SECOND ANNUAL MEETING OF THE EASTERN DIVISION OF THE AMERICAN PHILO- SOPHICAL ASSOCIATION

SUCH varieties of pursuits are labeled "philosophical" that it was altogether appropriate for a miscellany of interests to be represented in the papers and discussions which engaged those who assembled at Bryn Mawr College on Wednesday, Thursday, and Friday, December 28th, 29th, and 30th, 1932, for the thirty-second annual meeting of the Eastern Division of the American Philosophical Association. Few could have felt that their favorite provinces were entirely ignored, for there were papers in logic, epistemology, ontology, cosmology, ethics, and esthetics—studies in the works of Plato and Aristotle, Locke and Spinoza—theories about the proper business of philosophy—and papers in which topics from different fields were "harmoniously confused." Naturally also of considerable range, were the attitudes and types of view expressed during the proceedings. Skepticism, of several different kinds, contrasted with reliance upon moral convictions, or upon common sense; faith in rational analysis contrasted with distrust of fixed concepts; in the background of one view loomed the Absolute, in the foreground of another were "a lot of little absolutes"; and so on. But along with these differences of viewpoint, went sufficient agreement to make discussion and criticism worthwhile; following the papers, there was much debate, some portions of which are here recorded. Moreover, most of those who expressed their opinions, manifested a robust tendency—which it is frequently hoped is characteristic of philosophers—to eschew vagueness and dogmatism, and proceed critically with careful attention to what certainly seems to be reasonable evidence.

On Wednesday evening an informal smoker in the Common Room of Goodhart Hall provided pleasant means for greeting old friends, introducing newcomers, and chatting. The next morning, gathered in Goodhart Auditorium for the tercentenary session on Locke and Spinoza, members and friends of the Association were

extended a cordial welcome by President Marion E. Park of Bryn Mawr. President Park called the attention of philosophy teachers to an opportunity for practical service; much might be done, she suggested, toward helping college students, who face a period of social distress, achieve the advantages of clear and accurate thinking.

The paper entitled "John Locke" by Mr. Frederick J. E. Woodbridge, proved to be an illuminating commentary upon Locke's aim and accomplishment in the *Essay concerning Human Understanding*. Mr. Woodbridge reminded his hearers that Locke subordinated speculation to morals, and that in the *Essay* the theory of knowledge is studied not for its own sake, but for the sake of improving human living. Moreover, though Locke found the scope of genuine knowledge extremely narrow, he never doubted our competence to deal with practical affairs; for all the purposes of daily conduct, business, education, society, and politics, "the candle that is set up in us shines bright enough." Mr. Woodbridge declared that Locke would have us fulfill the purposes of living without waiting for a speculative justification of our activities; the *Essay* was in fact "a protest against sitting still and perishing," it was a protest against the theorizing which became its chief consequence in modern philosophy—theorizing about the relation of experience to nature. Locke urged us to ignore epistemology, although he did not himself ignore it. Having first adopted the Newtonian theory of nature, he tried to devise a compatible theory of experience as a product of nature; then he reduced knowledge to relations within experience. Consequently, for the conduct of life, knowledge had to be supplemented by belief or opinion. Mr. Woodbridge pointed out that on such a theory of knowledge it is difficult to see how we can know anything at all about nature; Locke had to say that we do not know, but maintained on grounds "partly religious and partly stubborn" that we are assured. Thus, according to Mr. Woodbridge, the lesson of the *Essay* becomes: "assurance of nature is prior to assurance of experience." In philosophizing, we begin with nature; later we discover experience, gradually circumscribe it, perhaps finally locate it in the head, the mind, or consciousness; but this "disengagement of experience from nature" is unintelligible unless there is the background called nature. At the conclusion of the paper, Mr. Morris R. Cohen rose to support the view that the study of metaphysics need not await the settlement of epistemological questions. Mr. Raphael Demos agreed that "epistemology is not the gateway to metaphysics." Mr. Sterling P. Lamprecht said that Locke wanted to restrain men's confidence and make skepticism, in matters exceeding human comprehension, a moral duty. Mr. Erza B. Crooks noted that for Locke the only bridge between experience and nature was

the primary qualities, and asserted that modern psychology has destroyed this bridge. Mr. W. P. Montague suggested as an antidote for the dualism which commonly arises when we consider the problem of the relation between experience and nature, an epistemological golden rule: See ourselves as others see us.

The second paper of the Locke and Spinoza tercentenary session was a discussion of "Spinoza's Doctrine of Intellectual Intuition" by Mr. Benjamin Ginzburg. The conception of intellectual intuition, Mr. Ginzburg asserted to be at once the key to Spinoza's system and the unifying methodological basis of such diverse elements as his behavioristic account of the passions and his doctrine of the intellectual love of God. Spinoza derived the conception of intellectual intuition from the Cartesian notion of the act by which the mind grasps a mathematical relationship, and used it in developing the hierarchy of the three stages of knowledge. The contrast of adequate and inadequate knowledge led him to conclude that "we are part of some thinking being, whose thoughts, some in their completeness and others in part only, form our mind." Mr. Ginzburg was led to conclude that Spinoza's doctrine of attributes was an historical accident, occasioned by the attempt to reshape Descartes' physics, and that "Spinoza is really conceiving all being as spiritual." In comment, Mr. David F. Swenson observed that Spinoza, by abstracting from "factual existence," appears to leave out ethics, which is concerned with the transition from a possibility to an actuality in us. Mr. Charles Hartshorne remarked that on Spinoza's view God is the perfection of all that is to be found in a small bit of reality if its temporal character be left out, and that until recently theologians have not tried to formulate the conception with Time included. Mr. Ginzburg welcomed Mr. Hartshorne's statement, but replied to Mr. Swenson that if we could achieve "the highest spiritual love of God," we would need nothing more.

Spinoza's dictum that *determinatio negatio est* was reaffirmed in the third paper of the Thursday morning session—a metaphysical consideration of "Non-being" by Mr. Raphael Demos. But while he relied upon this dictum in maintaining that "being is through non-being" and "to be one thing is not to be something else," Mr. Demos developed his views in Platonic-Whiteheadian rather than Spinozistic spirit. He argued that although ordinary experience and reflective thinking apparently reject the notion of non-being, actually non-being is presupposed both by the world of thought and by the world of changing individual things. Every particular is diverse from all other particulars; every form or essence is in contrast to all other essences; and every positive fact requires a set of negative facts. Reality is achieved through a combination of in-

clusion and exclusion. Each actual thing is an organic whole "constituted through a togetherness of forms," and limited to those forms. Mr. Demos likened an actual entity to a circle; just as a circle includes within its area an infinite number of points and excludes an infinite number of points, any given actual entity includes an infinity of forms and excludes an infinity of forms. This plea for the acknowledgment of an ultimate "negation" in reality, provoked a good deal of discussion. Mr. R. B. Winn denied that non-being could have an ontological status; "ontology," he said, "is concerned only with what is," and "if non-being is a fact, and a fact is what is, then we have a contradiction." Mr. John Somerville thought it possible to distinguish two uses of the expression "non-being" in Mr. Demos's paper: a useless use for the concept of otherness, and a use for the notion of pure non-being—a vague notion without positive content which Mr. Demos employed in such a way as to imply that something can be got from nothing. Mr. Cohen joined with Mr. Demos in urging that "the kind of being which belongs to negatives ought to be recognized." Miss Sarah Brown agreed with Mr. Demos that there is an ontological problem of negation, and pointed out that "Plato's otherness" can be used both for the "predicative not"—where a thing lacks some property, e.g., in the fact expressed by "This is not beautiful"—and for the "existential not"—where there exists no thing of a certain sort, e.g., in the fact expressed by "There are no elephants in this room." Mr. A. H. Kamiat remarked that the expression "non-being" seemed a mere figure of speech in the paper, since Mr. Demos always contrasted some being with some other being. Mr. Gregory Vlastos indicated a possible meaning for the expression by an example of specific disappointment: if a person desires an apple, and upon opening a drawer believed to contain one, finds no apple, then, relative to that interest, what we have is not otherness but "strict non-being." Mr. Ray H. Dotterer suggested that non-being might be regarded as a limit of difference. In answering his critics Mr. Demos insisted that being and non-being are polar concepts, the latter of which is quite as important as the former. He emphasized the importance of non-being in the ontological or existential sense by reference to the depression and the fact that Mr. Hoover was not in the room. He claimed that non-being is not vague and obscure but obvious—obvious in change, which can only be understood as passage from non-being to being, or the converse, and obvious in time, which requires the contrast between the present and the past or future. Boldly he met the charge of having a contradiction on his hands, by declaring, "Philosophers should not be intimidated by the law of contradiction . . . the ultimate categories are not subject to the law of contradiction!"

The session in Goodhart Auditorium on Thursday afternoon, was devoted to attempts to answer several questions about particulars and propositions. Discussing the question "Are There Particulars?" Mr. Brand Blanshard failed to find among the relevant statements of Mr. W. P. Montague and Mr. Bertrand Russell, any good reason for supposing that there are such things as particulars. Mr. Blanshard could not see how spatio-temporal relations or any other relations can determine uniqueness when the relations are themselves admittedly universals. Nor could he regard as successful, the use of particulars to avoid the paradox of having a universal existing to the left and right of itself, as in two patches of white; for he held that a universal must have the locus of its instances. He argued that particulars can not figure in thinking, either as subjects or as predicates, and that therefore if they do exist, they represent a blot upon the intelligibility of the world. In criticism, Mr. J. B. Pratt conceived the problem of particulars as that of the difference between the possible and the real, and reasoned that without the recognition of particulars there would remain no distinction between real things and imaginary things; the question of the historicity of Christ, for example, would become meaningless. Mr. Montague maintained in defense of his own position, that we arrive at both the universal and the particular by selective abstraction. "If I am confronted by Tweedledum and Tweedledee," he said, "I can by abstraction get the tweedleness which they have in common, and also observe that Tweedledum is to the left of Tweedledee. . . . The essence of particularity is position." Mr. Paul Weiss contended that, on the contrary, so long as one stays within the scope of what is given by abstraction, one will find only universals. Mr. Charles A. Baylis pointed out the unfairness of arguing against Mr. Russell on the assumption that a universal must be in the place where the instance is, when Mr. Russell employed "instance of" just in order to avoid making this assumption. Then Mr. Blanshard answered objections by saying to Mr. Pratt, that the way to decide whether a thing is imaginary or real is to put it in a larger context; to Mr. Montague, that "to the left of" is just as capable of repetition as "tweedleness"; and to Mr. Baylis, that "an instance of a universal can be an instance only if the universal is possessed by the place where the instance is." He agreed with Mr. Weiss that we must go beyond abstractions to find something which is not a universal but an individual; he thought of an individual as a "synthesis of universals in which every one implies every other," and personally he held that the only real individual is the Absolute.

Mr. Morris R. Cohen in treating the question "What Are Propositions?" noted that propositions have been viewed grammatically as

declarative sentences, psychologically as judgments, and logically as entities which are true or false; and then proceeded to characterize them as primarily linguistic forms which symbolize actual or possible complex situations. He denied that a judgment must always precede the utterance of a statement in order to give it meaning. "The meaning of words is a social matter, not a matter of individual intention," he said. Furthermore, the meaning of a proposition is not to be confused with someone's apprehension of that meaning—the former is a dyadic relation between a symbol and that which is symbolized by it, and does not depend upon the percipient. He stressed the fact that every proposition requires a context. When, for instance, one asserts, "Gold is yellow," the gold is assumed to be pure, to be placed in the proper light, etc. Strictly speaking, only when all of the relevant conditions are given, is a proposition true or false, and then it is true if there occurs in the designated universe the possible complex asserted, false if that complex does not thus occur. Replying to queries about his theory of meaning and of the test of truth, Mr. Cohen rejected the view that meaning is dependent on the mind of a percipient, and declined to accept any psycho-genetic test of truth.

Mr. Andrew P. Ushenko's paper on "The Problem of General Propositions" set forth a theory of the relations of general propositions to facts, which aims to provide a sense in which such propositions may be true, without requiring us to admit that there are corresponding general facts. First, with regard to existential general propositions, Mr. Ushenko found the Russellian analysis not only incomplete but incapable of completion. In an existential general proposition, the " x " in the prefix "there is an x ," can be neither a name nor a description; hence a proposition of this kind can not be about some x . He held that such a proposition does not express or correspond to a fact, but that it is a significant structure which is true if its function applies to some fact. And with regard to non-existential general propositions, he concluded that there is no correspondence with facts; a non-existential general proposition is true if there is no fact to which applies the function whose applicability is denied in the proposition.

In the last paper of the Thursday afternoon session, Mr. Lucius Garvin dealt with the question "Are Particulars Constituents of Propositions?" Against those who have supposed, for one reason or another, that all singular propositions are reducible to propositions containing concepts only, Mr. Garvin argued that some propositions have particulars as constituents and can not be understood without immediate acquaintance with particulars. Particulars he defined as entities which are characterized by universals, but not themselves

universals. Any proposition containing a particular as a constituent would, of course, be incommunicable unless both the expositor and his hearer or reader were acquainted with the same particular. Mr. Garvin illustrated the distinction between propositions containing particulars and those containing singular descriptions by two statements, neither of which, in his opinion, implied the other: "This table is brown," containing a particular, and "There is just one entity having Φ (Φ = an exclusive description of the table) and it is brown," containing no particular. Finally, he objected to an analysis of singular propositions suggested by Mr. Ushenko, which seemed to make the subjects of such propositions bare particulars from which all qualities had been abstracted; it would follow from this view that no such proposition is true, for then we should in each case be ascribing a quality to an entity which has no qualities. Mr. Weiss observed that, on the other hand, if the subject of a subject-predicate proposition always includes all its qualities, then all such propositions are necessarily true or necessarily false. Mr. Ushenko considered that propositions involving particulars as subjects do imply similar propositions containing definite descriptions, that "This is brown," for example, does imply "There is a unique thing which is brown"; also, he insisted that understanding a proposition having a particular as subject requires abstraction and a distinction between the particular and its nature, although it does not require that the particular be something naked and alone. Mr. Blanshard thought there was a contradiction in Mr. Garvin's asserting both that particulars are other than universals and that particulars must not be stripped of their natures. In rebuttal Mr. Garvin attempted to answer Mr. Weiss by pointing out that whereas "This red chair is red" is an analytic proposition, necessarily true, we can also say "This red chair is brown." He refuted Mr. Blanshard by pointing out that in the paper he had never said that a particular is something without qualities. And he replied to Mr. Ushenko that a proposition containing a particular need not imply a proposition containing a definite description, because there might be many particulars having the same character.

Thursday evening in Pembroke Hall, at the annual Association dinner, Mr. Edward Gleason Spaulding, in his presidential address on "Freedom, Necessity, and Mind," ambitiously undertook the labor of constructing a cosmological map which would represent the various parts of nature and of the realm of possibilities in their interrelationships. That his interest in this endeavor was entirely theoretical, he avowed at the beginning. Marking off two great realms, the natural world and the world of logical possibilities, Mr. Spaulding went on to maintain that in each of them there are

to be found instances of necessity and of freedom and of contingency or chance. "Necessity" was defined as external determination, "freedom" as internal determination or self-determination, and "chance" as the absence of both external and internal determination. "Necessity is identical with causation in nature and with implication in logic," he declared; freedom may be discovered where there are organic activities in nature, and in logic it "is identical with the determination of propositions or propositional functions within an isolated system"; and the complete absence of determination in some natural occurrences is equivalent to the absence of compulsion in the choice of postulates for a logical system. Tracing in outline the evolutionary levels of nature, he asserted that as one goes higher and higher in the organic regions, one finds increasing amounts of freedom; organisms are less at the mercy of external compulsion, more self-determined. At last one reaches mind, which is "the function of complete freedom"; and the practice of this freedom results in the "disclosure" of the parts and relational features of nature and of the logical realm. No universal scheme of determination, either natural or logical, is disclosed; we discern some necessitation, some freedom, and some absolute chance.

On Friday, both the morning session and the afternoon session were divided into two groups which met concurrently in Taylor Hall. In the morning, Division I opened with Mr. Ray H. Dotterer's paper on "The Operational Test of Meaninglessness." The question which this paper attempted to answer was: does the theory which identifies the meaning of any term with the operations which enable us to determine its applicability, provide a test of meaninglessness different from "*pre-operational*" logical tests? By examining the practice of physicists, Mr. Dotterer showed that in order to give operational definitions to the terms of physics, the operationalists must commonly resort to the theoretical employment of operations which are only imaginatively possible. And there seems to be no stopping place in this process of imaginatively altering actual conditions to make room for possible operations, short of the bounds set by logic. Mr. Dotterer argued that if it is permissible to imagine observers differing in spatial and temporal location and sensitive powers from all actual observers, and also bodies and forms of energy differing in magnitudes and velocities from those in the actual world, then there would seem to be no good reason for condemning as operationally meaningless, statements about absolute simultaneity, or about the definite position of particles in the atom on the Rutherford-Bohr theory. He concluded that the only justifiable criteria of meaninglessness are logical, and deprecated the rash use of the word "meaninglessness." Mr. Somerville wondered whether scientific terms not

immediately translatable into operational terms, have meaning only by reference to conceivable operations. Mr. John Dewey asked whether "infinite velocity" is meaningful, and if so, how an infinite velocity could conceivably be measured. Mr. George A. Morgan directed attention to the long jump which the logical positivists are making from verifiability as the test of truth to verifiability as the test of meaningfulness. To Mr. Dewey's question, Mr. Dotterer responded that the notion of an infinite velocity is a *Grenzbegriff* which we arrived at by having experienced higher and higher velocities, just as we reach the concept of a perfect plane by having experienced smoother and smoother flat surfaces.

Mr. Albert E. Blumberg offered an answer to the question "What Is Philosophical Analysis?" and discussed the notion of a correct analysis. "Philosophical analysis is the attempt to clarify the meaning of assertions," he said. Distinguishing two classes of assertions, statements of syntax and statements of fact, Mr. Blumberg held that the former are merely conventional and neither true nor false, and that the latter, which are true or false, have meaning only in so far as they are verifiable. The process of verification therefore determines the method and the direction of the analysis of factual assertions, and such an assertion is completely analyzed when it is translated into atomic propositions. The primary result of an analysis is a definition, that is, a convention as to the use of symbols. Mr. Blumberg explained that although the conventional character of definitions seems to make the expression a "correct analysis" meaningless, it can be used significantly in two ways: (i) to indicate that the definition reached corresponds to usage, and (ii) to indicate that the definition shows how the defined assertion ought to be used. In the first case, what is true is a factual statement that the definition corresponds to usage; in the second case, what is true is a factual statement about superior usage based upon utilitarian or esthetic considerations. Mr. Swenson objected that most definitions are not intended to be purely nominal. Mr. Demos thought that analysis should be regarded, not as something which deals with statements, but rather as a process which results in facts; for example, "an analysis of the present economic situation would break it up into a congeries of facts." Mr. Blumberg replied that "an analysis of the present economic situation" would mean one of two things, either a statement concerning the causes of the situation, or a definition of the expression "the present economic situation"—whereupon Mr. Demos demurred, "I don't think so." "To find out what people mean by a term," Mr. Blumberg continued, "we should not ask them what they mean, but ask them how they would verify statements in which it occurs." Mr. Demos: "But we are not interested

merely in symbols." Mr. Blumberg: "That is true, we are interested in the referends of the symbols."

A carefully reasoned paper on "The Logical and the Metaphysical Individual" by Mr. Paul Weiss, occasioned one of the most rousing and fruitful discussions of the whole meeting. He began by questioning the view that no material proposition is certainly true or certainly false; "Some day I will meet myself coming toward me" he regarded as certainly false, and "I know that I am an unrepeatable individual" as certainly true. Then from the consideration of certain arguments which have been used for and against the existence of individuals, but which he held to be mistaken, Mr. Weiss arrived at and defended his own doctrine: the logical individual is simple, unanalyzable, non-existent; the metaphysical individual, which has a unique privacy, is neither simple nor complex except potentially as that from which both the simple logical individual and a complexity of predicates may be abstracted, but it is metaphysically ultimate, the locus of predicates, and the ground of facts. Questions galore were soon hurled at Mr. Weiss. Mr. Demos inquired, first, concerning the difference between the individual and the real, second, as to the privacy or solitariness of individuals, and third, as to the possibility of our knowing that other individuals are private. Mr. Dotterer wanted to know how a non-existent logical individual can be derived from an existing metaphysical individual. Several people found it impossible to share Mr. Weiss's immediate certainty concerning the two empirical propositions with which he began; Mr. Somerville was of the opinion that "certainty" was merely "empirical possibility," Mr. Otis Lee asked if our knowledge of ourselves is different in kind from our knowledge of other individuals, Mr. Vlastos thought that the impossibility of one's being duplicated was an assumption and questioned how on the assumption of private individuals there could be communication, and Mr. Blanshard considered the impossibility of repetition not as something indubitable but as something which ought to be shown. Mr. Cohen took the position that the existence of the individual is something beyond proof, "a primary assumption." Mr. Hartshorne wondered if the fact that every individual is qualitatively different from every other, might not tell us something about the uniqueness of individuals. Mr. Boris Bogoslovsky asked whether the metaphysical individual is outside the domain of logical analysis; if so, whether it is desirable for the philosopher to investigate it; and if so, what the technique of the investigation is. Then Mr. Weiss replied to Mr. Demos that the metaphysical individual is the real; that we know ourselves immediately from within; and that other individuals, known only from without, are referred to as the sources of

inescapable qualities perceived, and have assigned to them privacies corresponding to our own. To Mr. Dotterer he replied that the logical individual has only the status of an abstraction analyzed out of the metaphysical individual. To those who questioned his knowledge of himself as a unique individual, he responded that he was "morally certain" he was an individual, just as certain as he was that a proposition and its contradictory can not both be true. To Mr. Lee he answered that other individuals are not known directly but are referred to. He admitted to Mr. Vlastos that "I am an individual" is an assumption—"an assumption of my fundamental sanity"—and replied that communication is done entirely in terms of abstractions. In answer to Mr. Blanshard, he said, "Every predicate of me can be repeated; but I can't. . . . The difference in our views is that you believe in one big Absolute, while I believe in a lot of little absolutes." Of course he rejected Mr. Hartshorne's suggestion that uniqueness might be reached by the perfect determinateness of characteristics. And to Mr. Bogoslovsky he replied that the metaphysical individual is not outside the scope of logical analysis in one sense, for it is subject to analysis, but is outside in another sense, for it does not appear in the propositions which result from analysis.

Mr. John A. Irving's paper on "Logical Positivism and Psychology" elaborated the thesis that the theory of meaning held by the logical positivists provides the essential technique for the organization of a scientific psychology. "The meaning of a proposition is its verification," said Mr. Irving; and "verification" he explained as the exhibition of the structure of the situation to which the proposition refers. He said, furthermore, that scientific propositions always have reference to our public, communicable world. Psychology, to be scientific and to give us knowledge, must abandon the attempt to deal with such meaningless questions as "What is it to be conscious?" and study only publicly observable behavior. Criticizing the paper, Mr. Swenson pointed out that one can not identify meaning—either in the sense of the thing meant or in the sense of the reference to it—with verification without implying that false propositions and propositions about the future are meaningless. Mr. Cohen analyzed verification as implying (i) a prediction that if the proposition in question is true there will be certain consequences, and (ii) an immediate observation, a look to see if there are such consequences; and he showed that verification is nonsense unless there is a point at which we have immediate knowledge. In reply to Mr. Swenson, Mr. Irving allowed that the *possibility* of verification is sufficient for the meaningfulness of a proposition, but added that until it is verified it is only a guess. In reply to Mr. Cohen, he in-

sisted again upon the public, social character of knowledge, but admitted that private observation is presupposed in verification. Mr. Cohen then worked in vain to draw from him an admission that it is inconsistent to hold both that all objective scientific knowledge is based upon private observation (seemingly undeniable), and that private observation is a futile thing which ought to be replaced by objective knowledge.

In Division II of the Friday morning session, the papers read were: "Relational Absolutes" by Miss Helen H. Parkhurst; "The Relation of the Moral to the Esthetic Standard in Plato" by Miss Katherine Gilbert; "The Right and the Good, Methodology in Ethics" by Miss Sarah Brown; and "Reality and 'the real' in Bradley" by Mr. Rudolf Kagey. Miss Parkhurst in her paper dealt with certain predicates belonging to series consisting of an infinite number of terms. She pointed out that temporal, spatial, and intensive predicates—such as old and new, large and small, weak and strong—appear upon analysis to be variable and relative; and that they may be interpreted either as expressing comparative degrees of the quantities in question, or as expressing complex or relational meanings having reference to some term not included in the series to which they belong. Hedonic and esthetic values were then considered as infected with the same apparent indeterminacy. Finally, Miss Parkhurst defended the view that all such terms, in spite of their complex and relational character, are absolute or objective.

Miss Gilbert's paper was an examination of the evidence upon which rests the belief that Plato judged the value of art by moral standards. She maintained that this belief is unwarranted, and that it has arisen from misinterpretations of two sets of passages in the Dialogues. First, passages concerning education in the *Republic* and the *Laws*, have been taken to imply an "ultra-Puritanical" attitude toward art; but "liberally and imaginatively interpreted," they present a theory not uncongenial to intelligent people to-day. Second, metaphysical passages in the *Symposium*, *Republic VI*, *Hippias Major*, the *Lysis*, and the *Philebus*, have been understood to involve a confusion of the moral and the esthetic categories; but Miss Gilbert urged that Plato's assimilation of Beauty to Goodness in the world of forms should not be thoughtlessly interpreted as meaning a confusion of values in the empirical world.

In her paper on methodology in ethics, Miss Brown took as her text a statement from *The Right and the Good* by W. D. Ross, "The moral convictions of thoughtful and well educated people are the data of ethics just as sense perceptions are the data of natural science." She advocated a methodology comprising a number of points: (i) The only proper data for ethical analysis are our usual moral

judgments in their concrete settings, involving acts and persons. (ii) The end of an ethical hypothesis is to order the data as coherently, adequately, relevantly, and simply as possible. (iii) Yet the truth of such an hypothesis may depend not only upon a datum, but upon an intuitive recognition of its rightness. (iv) The "rightness" of the datum is independent of the truth of the hypothesis and hence can be a test of its truth. The most serious objection to this methodology, Miss Brown considered to be the charge that it identifies what we mean by "right" or "good" with what right or good *is*; but, arguing that this objection rests upon various confusions, she concluded that "to give an analysis of what 'good' means in usage is to give an analysis of what good *is*."

Mr. Kagey's purpose in his paper was to show that Bradley, after writing *Appearance and Reality*, abandoned the bases which in that book made it legitimate to try to answer the question "What is Reality?" The legitimacy of this question depended there, according to Mr. Kagey's analysis, principally upon four things: (i) a substance-attribute logic; (ii) an "attributational" theory of judgment, with the conception of "floating ideas"; (iii) the use of non-contradiction as the characteristic of "reality"; and (iv) the acceptance of the distinction between infrarelatational and suprarelatational experience as descriptive of actual epistemic phases. Mr. Kagey asserted that because these tenets were afterwards abandoned by Bradley, *Appearance and Reality*, on Bradley's own testimony, became an attempt to answer an illegitimate question.

Friday afternoon in Division I the first paper was Mr. Kurt E. Rosinger's "The Identity of Formal and Material Truth in Rational Thinking." Mr. Rosinger proposed the thesis that all rational activity has the character of mathematical reasoning, and that the truth of propositions is always mathematical or formal truth. By typical examples of investigations in empirical science, philosophy, and the problems of everyday life, he undertook to show that the goal desired by those engaged in rational endeavors is simply the development of consistent logical systems. Certain entities are arbitrarily chosen as ultimate and certain assumptions involving these entities are made; then by reference to these assumptions the truth of many propositions can be determined. He asserted that a proposition derives its truth from the system in which it is found; for example, "A straight line is the shortest distance between two points" is true in one geometry, false in another, and torn from its context, it is neither true nor false; again, "God exists" is true in one philosophic system and can be proved by the assumptions given in that system, but in another system it is false. "Philosophy," he said, "is a set of systems; its problems and solutions are functions of these systems."

Mr. Weiss protested against putting the whole emphasis upon the range of possible systems, to the neglect of the point that some of these systems have application while others can not be made to apply. Mr. Dotterer asked how on such a theory there was any place for considerations of the adequacy of systems. Mr. Rosinger answered that we are continually attracted by propositions which we wish to make consistent with our system of propositions, and if our system is inconsistent with many of them, it is inadequate. Mr. Kretschmann inquired about our discovery of facts which force us to overthrow a system. Mr. Rosinger responded that if we find a proposition which is inconsistent with our system, but which nevertheless demands our assent, we have to alter our system so that there will be consistency. Mr. Spaulding expressed sympathy with the conception that a philosophical view depends upon the assumptions the philosopher makes, but wondered about the status of the inquiry with which Mr. Rosinger was occupied. Mr. Rosinger called his paper a venture in "the philosophy of philosophy," and mentioned some of his assumptions—he assumed the value of postulational treatment, assumed that there are alternative logics, and so on.

The second paper in this group was a discussion of "Aristotle's Analytic Method" by Mr. Abraham Edel. He described the Aristotelian "induction" as "a search for a tenable hypothesis"—a method of clarifying the meaning of a term or the structure of a concept by the process of abstracting elements of form from actual situations examined, and testing the results in fresh situations. Illustrations of the fruitfulness of the method in operation were drawn from Aristotle's works, largely from the *Physics* and *Metaphysics* Δ. Mr. Edel stated that the one fundamental assumption presupposed by the method, is "only that there are goings-on, events, happenings"—without this there would be no problem for the method to deal with. Observing that "induction" was used by Aristotle to discover basic principles and even what a principle is, Mr. Edel suggested that it may fairly be called his metaphysical method. In criticism Mr. Phillip E. Wheelright objected to the assertion that Aristotle's starting point was the assumption of goings-on, and contended this was a modernization of Aristotle. Mr. Edel retorted that Mr. Wheelright was fixing upon the entities which emerge at the end of Aristotle's analyses, rather than considering his starting point.

Mr. Lewis Feuer, who came next with a paper on "The Theory of Logical Continuity," introduced a program aimed to do justice to the aspects of "connectedness" and "continuity" in logical systems. Stressing the need of supplementing the extensional, atomistic interpretation of systems, characteristic of recent logic, he declared

that the notion of system must itself be accepted as primitive. The relation of entailment, taken from G. E. Moore, he would also assume as a primitive notion. A system entails a proposition in the manner in which any whole entails a part essential to it. A number of definitions are now possible. Consistency may be defined as the relation between two propositions entailed by the same system. Incompatibility, disjunction, and intensional implication may likewise be defined in these terms. Mr. Feuer pointed out that these concepts make connection with a calculus of intensional logic worked out by Mr. E. J. Nelson. Proceeding from this theory of system, formulated as a logic of intensional relations, it becomes possible to deal adequately with the differential causal laws of physics, and to develop a theory of types of systems to explain the systematization of system by system.

Concluding this division, there was a paper "On Truth" by Mr. John Somerville. Since this particular view makes truth dependent upon the method by which we seek a conclusion, Mr. Somerville began with a consideration of aims and methods. Given an aim—an intention to do something with some subject-matter, or find out something about it—we select the method that appears most appropriate for the accomplishment of that aim. Our method is always a matter of the "concepts, procedures, and assumptions" that we have, in the pursuit of our problem. When we reach a conclusion, the conclusion is true if and only if it has a certain relation to our method. Mr. Somerville offered as the most accurate and most fruitful definition of truth, the statement that "truth is one attribute of conclusions, namely, conformity to the conditions of the method intended to produce the conclusion." This account of truth, Mr. Spaulding disagreed with fundamentally; he cited cases to show that in science the absence of any preconceived theory is often the very condition which enables one to obtain a true result. He also objected to the implication that if different biologists using dissimilar methods were to test their opposing theories of organic activities, they might find that both mechanism and vitalism are true. Mr. Somerville admitted that there might be two such sets of truths.

The alternative division Friday afternoon, was devoted to an open discussion on ethics and social philosophy. Mr. Charles W. Hendel led off the discussion with a critique of E. A. Westermarck's recent book on *Ethical Relativity*. Mr. Hendel spoke of the distinction between the norms which custom establishes, and the moral norms which imply moral consciousness and freedom. He expressed agreement with Westermarck's main contention for moral relativity, but declared that this position renders the problem of moral validity all the more urgent. The general problems raised by Mr. Hendel were

discussed from various points of view. Mr. Ernest N. Henderson came to the defense of the moral value of custom. Mr. Jesse H. Holmes deprecated the emphasis upon standards, whether customary or "moral." Mr. Charles M. Perry called attention to the crucial problems which confront the teacher of ethics in view of the collapse of traditional sanctions for the younger generation. Others defended the value of formalistic ethics; still others claimed that in practice such ethics are unethical. Mr. Blumberg remarked that moralists would be of more moral value if they would confine themselves to a consideration of socialism and communism.

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BOOK REVIEWS

Les origines cartésiennes du Dieu de Spinoza. PIERRE LACHÎÈZE-REY.
Paris: Félix Alcan. 1932. xi + 288 pp.

The author has made a genuinely important contribution to the perennial problem of Spinoza's debt to Descartes. As between the opposing groups of interpreters, M. Lachîeze-Rey inclines decidedly to the side of those who believe that "in its fundamental inspiration and even in its general plan, the doctrine of Spinoza was constituted before any Cartesian influence" affected the latter (p. 1). The Cartesian influence was real and extensive. But, for M. Lachîeze-Rey, Cartesian doctrine was utilized by Spinoza in the interests of certain primitive ideas arising originally from Spinoza's own genius. These ideas served together as a "principle of assimilation and of transformation with respect to Cartesianism," but the ideas themselves can not be regarded as in any way derived from Cartesian teaching (p. 3). To this extent, and in this sense, Spinozism is neither a completion nor even a continuation of Cartesianism.

The standpoint indicated dictates M. Lachîeze-Rey's plan and procedure: first, the study of the operation effected by this transforming principle as expressed in the Short Treatise; and then the investigation of its prolonged consequences in the mature organization of Spinoza's position. The fundamental idea, which more than anything else expresses Spinoza's native bent, is said to be the conception of immanent causality. Our author, admitting in part the justice of Freudenthal's contentions with respect to the Dialogs in the Short Treatise,—i.e., agreeing that the second Dialog is probably later than the Short Treatise itself—urges that the First Dialog is earlier than the remainder (pp. 6-7). It can not be proved, he admits, that the First Dialog preceded Cartesian influence (p. 10). However this may be, it contains, as our author expresses his posi-

tion, "the pantheistic conception of the world which belongs to the original economy of the [Spinozistic] system." The doctrines which constitute the initial conception of Spinozism are "*étroitement solidaire*" and express "the different aspects of a single intuition which is that of immanent causality" (p. 252). Given this position, the Cartesian influence may be defined with accuracy concerning the central point upon which the process of assimilation and utilization depends. This point is defined by Descartes' doctrine concerning the modo-substantial relation, and its correlative, the doctrine of the principal attribute as defining the internal constitution and intelligibility of substance. Granting this, the task of systematic construction for Spinoza depends upon his ability to identify substance and immanent causality. This in itself entailed a transformation in the modo-substantial relation. Accordingly Spinoza's "primitive pantheism" plays "the rôle of regulative principle in the organization of the world of essences destined to" determine this pantheism.

M. Lachière-Rey's demonstration of this thesis comes to a head in his prolonged comparative study of the Cartesian and Spinozistic arguments for the existence of God, and especially of the ontological argument. Both philosophers "read, so to speak, the existence of God in his essence but this reading occurs for the one in an objective and ideal essence analogous to mathematical entities, while it operates for the other in the actual and formal essence of the immanent cause" (pp. 212-213). This comparative study is carried out with meticulous care, and M. Lachière-Rey demonstrates impressively his mastery of the literature on the Descartes-Spinoza problem.

If one find M. Lachière-Rey's thesis acceptable—and his work in its total effect is convincing—then the long controversy over the relation between the two philosophers must be restated. There will be students of Spinoza, of course, to whom the thesis will represent over-emphasis. M. Lachière-Rey declares in his final sentence that there remains, "in the midst of Spinozism, a definitive disaccord between the modo-substantial relation and immanent causality." The disaccord might prove to be less definitive if M. Lachière-Rey were less emphatic in his thesis.

M. Lachière-Rey's book, this reviewer must confess, proved to be difficult reading. Its perusal will arouse anew an American reader's suspicions of European dislike of printing arrangements that facilitate study. In this case we have lengthy chapters, without analytical chapter headings, without division of chapters into sections, and without other indications that might suggest plan of chapter and book. It must be admitted that the alphabetical index of contents is more detailed than occurs with many French philosophical writ-

ings. If these details, however, had been used for paragraph and section headings, the author's work could be more readily grasped. When M. Lachière-Rey's style is considered, the readers will all the more wish for such external aids. The intricate analysis of the book is expressed in a style that is cumbersome. The length of sentence and complexity of sentence structure are somewhat surprising in a French book, even if it be philosophical. These somewhat petulant complaints of the reviewer must not be allowed to detract from the excellence of the work itself.

ALBERT G. A. BALZ.

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Science et Philosophie d'après la Doctrine de M. Emile Meyerson.

HENRI SÉE. Paris: Félix Alcan. 1932. Pp. 203.

Apart from a summary exposition and defence of Meyerson's historical *rapprochement* of philosophy and the sciences, M. Sée, who is primarily an historian of political economy, wishes to extend Meyerson's doctrine of causal identity to the social sciences. For example, history will employ causal explanations in seeking to identify the complex causes of the decline of the Roman Empire or the events that led to the French Revolution; history is never content merely with descriptions. The failure of the historian to find laws is due to the non-recurrent and volitional factors characteristic of human events, and is not due to the historian's lack of intellectual interest and faith in seeking underlying causal invariants. Thus, M. Sée excludes "legalism"—the descriptive philosophy of science—from history and social science, as Meyerson has attacked it in the natural sciences in favor of "causalism" or the search for explanatory identities, a search that characterizes all thought. However, Meyerson has made it quite clear that causalism does not exclude legalism, but on the contrary, is strictly implied by it. Neither does M. Sée realize that there is an internal difficulty in making minds, which are defined as *identifying* agents by Meyerson, the subject matter of science, so long as he retains Meyerson's view that *only diversity* can constitute the subject-matter of any science. If the human minds that are studied in social science are efficient agents as well as formal structures that seek to impose identity on the diverse, then we must abandon Meyerson's view that pure identity is the essence of all thought. Finally, when M. Sée declares (p. 86) that "it is a characteristic of French philosophy, as M. Meyerson remarks, never to have lost contact with mathematics and the physico-chemical sciences (contrary to the German and even English traditions)," he is not only ignoring unjustly many contemporary German and English philosophers (Hilbert, Weyl, Reichenbach, Rus-

sell, Whitehead, etc.), but he is also exposing Meyerson and the French tradition to the very criticism Meyerson has himself made against positivism; namely, its slavish attachment to the *content* of exact science without appreciation of its ideal *intent*.

PHILIP PAUL WIENER.

COLLEGE OF THE CITY OF NEW YORK.

JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. Vol. XLII, 2. Philosophy and the Problem of Value: *A. P. Brogan*. Mind—An Event in Physical Nature: *H. C. Brown*. Freedom, Necessity, and Mind: *E. G. Spaulding*. Proceedings of the American Philosophical Association, 1932.

THE MONIST. Vol. XLIII, No. 1. Spinoza: His Personality and His Doctrine of Perfection: *E. L. Schaub*. Spinoza's Political and Moral Philosophy: *T. V. Smith*. Four Principles of Method—with Applications: *Charles Hartshorne*. Epitomization and Epistemology: *G. P. Conger*. Numerical and Qualitative Identity: *E. W. Hall*. Current Skepticism of Metaphysics: *W. S. Gamertsfelder*. Implication, Modality and Intension in Symbolic Logic: *Leo Abraham*.

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Barth, Heinrich: Das Sein in der Zeit. (Philosophie und Geschichte, 42.) Tübingen: J. C. B. Mohr (Paul Siebeck). 1933. 31 s. 1.50 M.

Gandhi. Der Heilige und der Staatsmann. In eigenen Aussprüchen. Ausgewählt und eingeleitet von B. P. Bedi und Freda M. Houlston. Mit einem Geleitwort von Rudolf Otto. München: Ernst Reinhardt. 80 s. 1.80 M.

Bouglé, C.: Un Moraliste Laïque Ferdinand Buisson. Pages choisies, précédées d'une Introduction par C. Bouglé. Avant-propos de Édouard Herriot. Paris: Félix Alcan. 1933. xi + 192 pp. 12 fr.

Edwards, D. Miall: Christianity and Philosophy. New York: Charles Scribner's Sons. 1933. Edinburgh: T. & T. Clark. 1932. xv + 367 pp. \$3.00.

Guittou, Jean: Le Temps et l'Éternité chez Plotin et Saint Augustin. Paris: Boivin et Cie. 1933. xxiv + 397 pp. 40 fr.

Guittou, Jean: *La Philosophie de Newman. Essai sur l'Idée de Développement.* Paris: Boivin et Cie. 1933. xli + 243 pp. 30 fr.

Guttman, Julius: *Die Philosophie des Judentums.* (Kafka-Geschichte der Philosophie in Einzeldarstellungen. Band 3.) München: Ernst Reinhardt. 1933. 412 s. 7.50 M.

Kemp Smith, Norman: *John Locke. (1632-1704) (Adamson Lecture for 1932.)* (Manchester University Lectures, XXVIII.) Manchester: Manchester University Press. 1933. 31 pp. 2/.

Neurath, Otto: *Einheitswissenschaft und Psychologie.* (Einheitswissenschaft schriften herausgegeben von Otto Neurath in Verbindung mit Rudolf Carnap, Philipp Frank, Hans Hahn. Heft 1.) Wien: Verlag Gerold & Co. 1933. 31 s.

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von Wesendonk, O. G.: *Das Weltbild der Iranier.* (Kafka-Geschichte der Philosophie in Einzeldarstellungen, Band 1a.) München: Ernst Reinhardt. 1933. 354 s. 6.50 M.

Whitehead, Alfred North: *Adventures of Ideas.* New York: Macmillan Co. 1933. xii + 392 pp. \$3.50.

Winkelmann, Elisabeth: *Coleridge und die Kantische Philosophie. Erste Einwirkungen des deutschen Idealismus in England.* (Palaestra 184.) Leipzig: Mayer & Müller. 1933. 258 s. 14.80 M.

NOTES AND NEWS

Everett W. Hall, at present Assistant Professor of Philosophy at Ohio State University, has accepted an appointment as Associate Professor of Philosophy at Stanford University.

Mildred Waterhouse, professor of philosophy at the University of Denver for the past seven years, has submitted her resignation as a member of the faculty, to become effective at the end of the present academic year.

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Book Reviews. Journals and New Books. Notes and News. Index
for Volume XXIX.

Volume XXX. No. 1. January 5, 1933.

On the Existence of a Necessary Being. JEROME GASPARD.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 2. January 19, 1933.

Dr. Whitehead on Perception. DANIEL CORY.
The Development of James's Pragmatism Prior to 1879.
MAURICE BAUM.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 3. February 2, 1933.

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Volume XXX. No. 4. February 16, 1933.

Non-Being. RAPHAEL DEMOS.
Report of the Ninth Annual Meeting of the Pacific Division of the
American Philosophical Association. DONALD C. WILLIAMS.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 5. March 2, 1933.

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Logic as Language Habits versus Logic as Formal Truth.
MARIE SWABEY.
Book Reviews. Journals and New Books. Notes and News.

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Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917.
Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
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An annual bibliography of psychological literature.
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Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
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Quarterly. 448 pages annually. Founded 1906. Abnormal and social.
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- Journal of Experimental Psychology.**—Princeton, N. J.
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Subscription \$7.00. Founded 1916. Bi-monthly. Edited by Samuel W. Fernberger.
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THE JOURNAL OF PHILOSOPHY

IS IDEALISM REALISM?

WILL someone tell me what "Idealism" means? Speaking for the generation of philosophers that was doing its graduate work in the late '90's and the early years of the present century, I think I may say that we were brought up to believe that there were two great schools of philosophy, namely, Idealism and Realism; that though within each school subdivisions and disagreements could be found, the sharp and important line of cleavage ran between Idealism and Realism as such, and that there was little or no difficulty in distinguishing the two. We all knew pretty well what a realist was: he was a thinker who believed that the physical world did not depend for its existence on consciousness in any form; a physical thing was not itself a center of consciousness, nor did it have to be the object of any mind, whether finite or infinite, in order to be real. An idealist, on the other hand, was a thinker who denied this. He believed that it was meaningless to assert the reality of a hypothetical entity which was neither the object of a subject nor itself a center of some form of consciousness. "No object without a subject," "*esse est percipi*," these and formulas like these were the slogans of Idealism thirty years ago.

It would lead this paper into inexcusable length should I seek to substantiate this conception of Idealism by citations from leading idealists. I must content myself with recalling to the reader only two or three familiar passages. A large number of us, in those old days, cut our philosophical eye-teeth on Paulsen's *Introduction*. In that we learned that Idealism was to be defined by its teaching that "mental processes constitute reality as such; the physical world is a mere phenomenal form of this true reality."¹ Bradley, who thirty years ago was (and I believe still is) regarded as one of the leaders of British Idealism, told us that "sentient experience is reality and what is not this is not real. We may say, in other words, that there is no being or fact outside of that which is commonly called psychical existence."² Similarly Royce defined Idealism as the view for which "that is real which finally presents in a complete experience the

¹ Pp. 47-48.

² *Appearance and Reality*, Chap. XIV.

whole meaning of a System of Ideas." This definition Royce made more explicit by contrasting Idealism with Realism, for which "that is real which is simply *Independent* of the mere ideas that relate or that may relate to it."³ That the *esse est percipi* was an essential part of Royce's Idealism is shown by the decisive rôle it plays in the idealist argument as presented in "The Conception of God" and in "The Religious Aspect of Philosophy": and I remember Royce telling me personally that in his opinion the *esse est percipi* must form an aspect of every genuine Idealism—though of course the *percipi* need not refer to finite thinkers but required only the Absolute Mind.

The meaning of Idealism, I repeat, was all pretty clear to us up to say 1905 or 1910. Then, somehow, the sharp lines of distinction began to blur, and "Idealism" showed signs of dissolving into a nebulous haze. I do not know when the change began. Mr. Moore published his *Refutation of Idealism* in 1903, in which, it will be recalled, he attacked the *esse est percipi* and took it quite for granted (as I think nearly all his readers did) that thereby he was attacking Idealism. In 1910 Professor Perry wrote his article for this JOURNAL on the "Ego-centric Predicament," republished the following year in his *Present Philosophical Tendencies*, in which he concentrated his attack upon the *esse est percipi*, "the cardinal principle of idealism." And then, to the considerable bewilderment of many of us, we began to learn, from idealist after idealist, that the *esse est percipi* principle was no part of Idealism and never had been.

As I have followed idealist literature in recent years my uncertainty as to what idealists mean by Idealism has steadily increased. It was therefore with considerable satisfaction that I noticed the announcement of *Contemporary Idealism in America*, the joint work of eleven American idealists recently published by Macmillan. I sent for the volume and began it with avidity; now at last the question that had bothered me for twenty years or more was to be definitely and authoritatively answered. The book proved very interesting, and I found in it many true and important thoughts admirably expressed. But on the central question as to what Idealism is it has left me in quite as dense a fog as I was before I opened it.

Not that I learned nothing from the book; I learned many things; and concerning Idealism the following. Idealism is an idealistic view of Reality. "The idealist prefers"⁴ an organic view of the Universe. Idealism is also "a recognition of the primacy of spirit in the world."⁵ If, as Aristotle says, all philosophers begin either with Chaos or with Zeus, "the idealists begin with Zeus, which means that

³ *The World and the Individual*, Vol. I, p. 61.

⁴ P. 16.

⁵ P. 16.

they begin with the soul.”⁶ Nearly all idealists believe in the self, and many of them make much of it; though just what they mean by the word is a question on which one becomes but the more bewildered as one reads farther and farther in idealistic philosophy. Several of the writers of the volume under discussion insist that the concept of the self is fundamental to Idealism; but as Professor Brightman points out, “If we ask what contributions idealists have made toward the discovery of fundamental traits of the finite self, we confront an embarrassment of riches. Not only is there an amazing abundance of material, but also there are amazing contradictions in it. It can not be said that there is a single consistent doctrine of the self shared by all idealists.”⁷ At least three of the contributors to the volume are thoroughly antagonistic to the views of the self held by Bradley, Bosanquet, and Hoernlé. In short, we can hardly discover what Idealism is by citing its doctrine of the self, for the good reason that *Idealism* has no such doctrine.

Professor Urban feels the need of a definite delineation of the general subject more keenly than some of his colleagues, and he therefore gives us four propositions which constitute “the idealistic minimum.” These are the following: (1) “The world has a meaning”; which is explained as meaning that the world is a “logical” or “spiritual” system. (2) Knowledge can not be an empirically describable relation between existents. What, according to Idealism, knowledge is, we are not told. (3) “Idealists are disposed to think that meanings presuppose values,” and values must be taken as not derivative but ultimate. “They are not our contributions to reality but have a cosmic significance.” (4) Meanings and values imply “some kind of ‘mental life’ at the core of reality. . . . The idealist can afford to be quite vague and liberal in his use of this expression ‘some kind of mental life.’ ”⁸

As this passage is the most explicit attempt in the volume to delimit Idealism, it deserves special attention. In the first place, it strikes the reader at once that if this idealistic minimum is really “irreducible,” at least two and probably three of the eleven contributors to the volume will have to be asked to leave the company. For if one may judge from their writings one can hardly suppose that either Professor Brightman or Professor Leighton would assent to Professor Urban’s rather impersonal and “cosmic” doctrine of values; and certainly a large number of historical “idealists” would decidedly fight shy of it. On the other hand, if condition number (3) is too narrow to admit all “idealists,” numbers (1) and (2) are

⁶ P. 31.

⁷ P. 171.

⁸ Pp. 105-106.

so roomy as to admit a large number of thinkers whom, at any rate, one never used to classify as idealists, including most of the "realistic" theologians of Christianity. Finally, condition number (4) is so decidedly "vague and liberal" in its use of the expression some kind of "*mental life*" (the reader will observe the significant quotation marks around "*mental life*") that it gives but slight assistance in one's honest effort to find some definitive meaning in the word Idealism. For "*mental life*," especially when inclosed in inverted commas, is as ambiguous a term as "*experience*" in the mouth of idealists, experimentalists, and even Whiteheadian realists.

Two papers in the volume (those by Professor Tsanoff and Professor Hendel) are devoted to ethical questions. They are well worth reading, but I can not make out that either these writers or any of the other contributors to the volume (unless it be Professor Urban) would maintain that Idealism is to be defined by some ethical doctrine, or to insist that no one who rejects the ethical views herein outlined can rightly be called an idealist. The two ethical papers are interesting, but I can not see that they forward our specific research.

More hopefully we turn to the passages, scattered throughout the book, which make reference to the ancient line of division between Idealism and Realism. The reader who comes to this volume with old-fashioned views about *esse est percipi* will do well to begin, as the book does, with Professor Bakewell's contribution on "The Continuity of the Idealist Tradition." The second paragraph of this paper opens thus: "It is well at the start to emphasize the fact that Idealism is not, in any of its significant expressions, to be identified with mentalism. That is, it is not a doctrine that resolves physical objects into mental states: a doctrine that holds that the things that you see out there in space are in reality just bundles of feelings, groups of sensations, states of consciousness, within the mind."⁹

This is as plain as (to some of us) it is surprising. On finishing it, the reader feels that here at last something is settled: Idealism takes just the same view of the physical world as Realism. But the reader should not go too fast in forming his conclusion. Ten pages later on, Professor Bakewell tells him that, "We come nearest to a description of reality when we regard it as a community of self-active creative spirits."¹⁰ Just what does this mean? It seems to mean that reality is a community of spirits; and (since the statement was considered worth making) it presumably means not only that spirits are parts of reality, but that they constitute the whole reality. If this is the case, what has become of the doctrine that physical

⁹ P. 25.

¹⁰ P. 35.

objects are not mental states? If nothing is real but a community of spirits, how does the resulting situation differ from "mentalism"? That something very like mentalism is intended seems to be further indicated by later passages of the same essay. "The transcendental ego is not another ego but my own. The world of nature is both dependent and independent: dependent on the universal knower, but independent of just this finite knower."¹¹ When an "idealist" says that the world of nature is dependent on the universal knower, he is presumably not using the word "dependent" in the sense of the first Chapter of Genesis. It looks very much as if he meant that physical nature was resolved into the "mental states" of the "universal knower." Perhaps. I can not be sure. A passage on the following page makes me think this is probably the correct interpretation: "The physical world is and can be understood only in terms of experience and possible experience." This seems again plainly "mentalism"; I was probably right. I go on to the next sentence: "This does not mean that it is made up of the sum of our several experiences. It is infinitely more than that. It contains innumerable facts that no one has experienced or ever will. There is a single realm of experience and our individual experiences have their being therein."

It is passages such as these that make a dull and unimaginative realist like myself cudgel his brains in despair. He feels like rushing to his nearest idealist friend for explanation. But he knows by past experience that the explanation would probably be more difficult for his sadly Aristotelian mind than was the original passage. (I sometimes feel that the best way to define an idealist would be to say that he is a man who is able to understand the expressions of other idealists.) At any rate, to me the flash of insight does not come. I have to get along in my lumbering, realistic fashion, and ask myself: What can be meant by the "single realm of experience" in which, apparently, the physical world has its being? If "experience" be used in the ordinary sense as equivalent to consciousness, then the passage plainly means that things are (as Bradley and Royce taught) "psychical existences" for a universal knower. Thus we should have "mentalism" after all. If, on the other hand, "experience" refers merely to a conceptual realm (like Royce's *Critical Rationalism*) it is hard to understand the things said about the "universal knower" and about reality being a community of spirits. If, finally, "experience" means something more than the merely conceptual and definable, and yet does not mean consciousness, it is hard for me to guess what it can mean other than just a realm of definable and unconscious things: which is Realism. But if Realism be intended I can not see why the things should be "dependent on

¹¹ P. 40.

the universal knower." Since reality "contains innumerable facts that no one has experienced or ever will," are we to conclude that "the universal knower" knows but does not experience them? Or that "the universal knower" is not universal? Or that he is no one? I can only confess my complete bewilderment.

Well, let us get along to the other contributors. Professor Hocking quotes Royce as having said in a lecture (in 1915-1916): "It is not the most important feature of idealism that it appears to be committed to an insistence . . . that the being of things, whether of God or man or the physical world, is a being in the mind of some thinker."¹² I am not sure whether this means that Royce gave up "mentalism" or not. To say that mentalism is not the most important feature of Idealism and stop there sounds certainly non-committal. Professor Hocking in his contribution to this volume is as non-committal as Royce; but in his *Types of Philosophy* (1929) he says explicitly that he takes Idealism "to signify simply that whatever is ultimately real in the universe is such stuff as ideas are made of rather than such stuff as stones and metals are made of,"¹³ (a sentence which reads strangely in connection with Professor Bakewell's sentence recently quoted, that "idealism is not a doctrine that resolves physical objects into mental states").

Professor Hocking plainly believes that Idealism is (among other things) mentalism. The seventh and ninth contributors to the volume take quite the opposite view—at least the opposite view of what Idealism should be. According to Professor Leighton electrons and atoms are real in the realist sense. They do not need to be objects of thought in order to be actual, and they may be and probably are quite "insensate."¹⁴ Professor Boodin writes: "Modern idealism has been afflicted with psychologitis. . . . We can not banish the galaxies of stars and their space-time relations by retreating within our own subjective world and declaring matter, time, and space to be mere appearances. No day-dreaming can undo the fact that we have emerged in the history of the earth, which in turn is part of the sun, which in turn is a member of one of the multitudinous galaxies of stars."¹⁵ This passage is, of course, perfectly consistent with a mentalism which would make physical objects essentially conscious content for a "universal knower"; but from a perusal of Professor Boodin's paper I do not think he means this. I may be quite mistaken.

Of the remaining contributors Professor Hoernlé is the only one

¹² P. 45.

¹³ P. 249.

¹⁴ Pp. 135-136.

¹⁵ P. 206.

who refers to mentalism. Professor Whitehead, he argues, is not a realist but an idealist because he maintains "that every actual existent is an experience, or feeling." This, adds Professor Hoernlé, is "the essential point" and "it aligns Whitehead with all Idealists and opposes him to all Realists." (Incidentally, it apparently opposes him also to Professor Bakewell who on behalf of Idealism rejects the doctrine that physical objects "are in reality just bundles of feelings.")

I ask again, will some one tell me whether Idealism believes in mentalism or not? Further, I should like to know the attitude of Idealism toward the dualistic theory of knowledge. Is the mental content in knowing identical with the object known, or at any rate identical with a part or slice of the object known? The first of the contributors to deal with this question is Professor Bakewell. At least I think he deals with it. He writes: "When I perceive an object, yonder table, for example, I do not perceive some shadowy copy, in my mind or in my brain, of an existent object. It is the existent object itself in the common world that I am directly and immediately conscious of." This, I should say, is a plain rejection of epistemological dualism. In fact, from the discussion on page 27 it would appear that the writer does not think epistemological dualism worth mentioning as even a possibility; for in dealing with the interpretation of Realism he suggests only two alternatives, neither of which is the theory of epistemological dualism. "If realism means to affirm the existence of independent reals outside the realm of experience, and therefore wholly independent of consciousness, it is the old hypothetical realism whose absurdities have so often been shown up in the history of philosophy. If it means to affirm the existence of independent reals which are none the less wholly accessible to experience, directly experienced or known, it is hard to see how this doctrine conflicts with idealism except that, etc." This latter sentence seems plainly to refer to some form of epistemological monism such as that of the New Realism. The first sentence I take as referring to some such conception as Kant's things-in-themselves. If so, as I have said, Professor Bakewell thinks epistemological dualism of the sort suggested by Critical Realism too absurd to mention. But my interpretation of the sentence may be mistaken. Perhaps it may be intended as an explicit rejection of epistemological dualism (thus conveniently refuted by a passing reference to its "absurdities"). Or the sentence may mean a reversion on Professor Bakewell's part to the defense of mentalism which he had ridiculed out of court on the preceding page. But whatever the proper interpretation of this sentence, it seems plain to me that Professor Bakewell utterly rejects the dualistic doctrine which would distinguish between the content of thought and the (assumed) object of thought.

May we then be sure of this much about Idealism, that it rejects epistemological dualism? Alas no! Professor Cunningham, in his contribution to the volume, makes a long argument¹⁶ showing that if *meaning* is to be saved we *must* make the distinction between object and content, and he adds that he knows of no idealist who has ever denied it. Professor Brightman says explicitly (on pages 179-180) that in his opinion Professor Lovejoy has conclusively proved epistemological dualism to be true. Incidentally we may recall that a British idealist, Professor Kemp-Smith, in his recent *Prolegomena to an Idealist Theory of Knowledge*, accepts a symbolic, that is to say dualistic, view of the knowledge situation.¹⁷ It would seem, therefore, that Idealism both rejects and accepts epistemological dualism, or perhaps regards it as unessential: a view which would imply that Idealism as such has no theory of knowledge.

What then is Idealism? Can we make it definite by contrasting it with Realism? Or is Idealism Realism? As the reader will have surmised, the answer to these questions is very difficult to obtain from this volume. Among the contributors Hocking and Hoernlé would quite definitely reply that Idealism is not Realism. Apparently Bakewell if pressed would give the same answer in spite of his assertions that Idealism is not mentalism and that "further confusion arises from the tendency to regard Idealism as defined by contrast with Realism."¹⁸ If we follow Hocking and Hoernlé in taking Idealism in the traditional sense as defined (in part) by contrast with Realism, it would seem that it has of late been fighting a losing battle. Hoernlé (who writes on "The Revival of Idealism") points out the eclipse which Idealism has suffered, especially in America, during the last twenty-five years. "A canvass of the names of the outstanding philosophical thinkers of the present day in the United States, as represented by the two volumes on *Contemporary American Philosophy*, shows a mere handful who would agree to be labeled 'Idealist,' and even then only on a very elastic definition of this long-suffering term."¹⁹ It was probably for this reason that the group of American idealists who wrote this volume sent to South Africa for reinforcements; and that Professor Hoernlé, when he arrived, went out into the highways and hedges and compelled Professor Whitehead and Professor Dewey to come in—as I guess, quite unwillingly and quite unwittingly.

As we have seen, there are a few idealists of the old school left. But the majority even of those who wrote *Contemporary Idealism in America* are not of this stripe. Brightman, Cunningham, and

¹⁶ Pp. 86-89.

¹⁷ Chapter I.

¹⁸ P. 26.

¹⁹ P. 301.

Leighton, on the old questions that Idealism and Realism used to discuss, have come out on the realistic side. Boodin apparently agrees with them. The other contributors do not on this point commit themselves. I gather that many "idealists" would assert with Professor Bakewell that Idealism can not be defined by contrast with Realism.

What then is Idealism? Is it the rather general view that "Mind" (conveniently left undefined) on the whole controls the Universe? Or that the self (in what sense not designated) is real? Or are all thinkers to be classed as idealists who can not be classed as mechanists and naturalists? Is Idealism another name for optimism? Or is it just a general kind of tendency? The editor of the volume suggests this conclusion. Idealism "is an attitude, not a creed. It is a way of interpreting human experience, not the conclusions of a specific interpreter. It is a living tradition, not a religious veneration of accumulated philosophical dogmas."²⁰ Something—am I to gather—like a Church which may change its creed every decade and still remain the same Church? Or like a self-perpetuating Club of congenial gentlemen of refined taste? Perhaps something like the Republican Party?

Personally I wish the word "Idealism" might be allowed to retain enough definiteness to remain—what it used to be—a useful term in philosophical discussion. My own opinion is that this could best be brought about by common agreement that, whatever else it is, Idealism is not Realism. If so much of definiteness were left to the word we might all have some useful notion as to what it means. I hardly dare make such a suggestion; for what right have I, an outsider, to suggest to idealists how "Idealism" should be defined? But, then, *am* I an outsider? I have no way of telling till I know what Idealism is. It may be that, like Whitehead and Dewey, I have been an idealist all my life quite unwittingly.

But my disappointment at getting from the recent volume no definite answer to my question, is largely counterbalanced by my delight at the growing insight of the many thinkers (both in the volume and out of it) who though called idealists are more eager for the truth than for the defense of a name, and who see and courageously proclaim the difficulties of the older Idealism. It would be churlish indeed of dualistic realists like myself to reject the seeming offer of coöperation thus made by those who, under another flag, are fighting much the same battle as we. Speaking for myself, at any rate, as one of the large, but for the most part timid and speechless company of dualistic realists, I should welcome these "idealists" cordially into our old camp. We are greatly in need of

²⁰ P. 14.

reinforcements from courageous men. Though we are a very large company, most of us are afraid to say our souls are our own. The Absolutists on our right tell us that our souls are not our own but the Absolute's; while the Naturalists on our left assure us that we haven't any souls anyway. We believe neither of them, but we dare not say so. To believe in a real self, or to confess the guilt of Dualism, would be bad taste—it simply is not done. Hence I feel like stretching out my hands and calling, Dear brave, dualistic-realistic idealists, come over and help us!

But I also still stretch out my hands to the whole noble army of philosophers, including the readers of this bewildered confession of mine, and repeat the entreaty with which I began this paper: "Will someone tell me what Idealism means?"

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FACTS: THE LOGICAL PERSPECTIVES OF THE WORLD

WHAT is a fact?—That is one of the great mysteries of philosophy. Like most metaphysical questions, it has had to wait for an answer, through generations and perhaps centuries, pending the development of an adequate logic; for it has been one of those logically muddled problems which have to be recast in order to be capable of any answer at all.

The growth of natural science has evoked some interest in the status of "scientific facts"; but discussions on this subject have usually hinged on the epistemological difficulties of finding the criteria of true propositions, rather than on the deeper question of what is actually the nature of a fact. This latter problem has come to the fore somewhat more recently, through the logical study of propositions, meaning, assertion, and truth—not through consideration of the plausibility of certain alleged facts, but through the somewhat subtler contemplation of symbolism, especially of the relation that holds between symbols (such as propositions) and the facts they represent. Philosophers have been driven from logic to metaphysics; from propositional structures to the structure of facts, so that the recognition of "atomic" propositions led to the assumption of "atomic facts," the existence of "universal terms" to a belief in "universal" constituents of facts, and so forth. The doctrine that facts have the same forms as propositions seems so well established as to pass for general knowledge, or common sense; indeed, it is hard to conceive of a fact as anything but the hypostatization of a proposition. Facts are "about" certain entities, just as propositions are;¹ they may have subjects and predicates, or be of

¹ See J. A. Chadwick, "Logical Constants," *Mind*, January, 1927, p. 2: "Facts may be *about* portions of Space-Time."

the relational type; Dr. C. H. Langford, in an article on "General Propositions," speaks of "facts of the subject-predicate kind" and "facts involving a relation of several terms."² Thus the structure of reality is conceived as the structure of what might be termed "propositional logic," and just as the logical system can be analyzed into propositions, involving lower propositions, down to the "atomic" type, so "the world divides into facts," with the "atomic" facts as its ultimate terms.

The tacit assumption underlying this view is simply the *credo* of all rationalistic metaphysics, which Spinoza expressed in the *Ethics* (Bk. II, prop. 7): "The order and connection of ideas is the same as the order and connection of things." If our fundamental ideas are those of subject and predicate, the world consists of substance and attribute; as the ideas become more refined, we graduate to a world of particulars and universals, and then to a world of ultimate atomic facts. This evolution of logical metaphysics is aptly illustrated by a passage in the late F. P. Ramsey's essay on "Universals":³

"It is a point which has often been made by Mr. Russell, that philosophers are very liable to be misled by the subject-predicate construction of our language. They have supposed that all propositions must be of the subject-predicate form, and so have been led to deny the existence of relations. I shall argue that nearly all philosophers, including Mr. Russell himself, have been misled by language in a far more far-reaching way than that; that the whole theory of particulars and universals is due to mistaking for a fundamental characteristic of reality, what is merely a characteristic of language."

This criticism, curiously enough, applies to Ramsey's own logic; but with this added refinement, that it is not grammatical language, but what has been termed "logical language," that leads such astute spirits as Wittgenstein and Ramsey into their world of "atomic

² *Mind*, October, 1929, p. 443. In this same article he undertakes to show how, "in constructing general propositions, we can replace elementary matrices, whose values are elementary propositions, by functions whose values are not propositions at all, but certain facts, which are non-general facts" (p. 436). On p. 446, he claims to have found a notation whereby "we replace the expression '*x* is green,' which applies to propositions, by the expression '*g(x)*,' which applies to facts; so that we can replace 'There are true values of '*x* is green'' by '*g(x)* exists.'" For my part, I can not see that there is a definite distinction of meanings, so long as "exists" is taken in a metaphysical sense (referring to *facts*) which does not belong to logic at all. The *fact* is here a hypostatized proposition.

³ *Mind*, October, 1925, p. 404 f.

facts."⁴ We will presently return to this notion of "logical language"; but first let us consider (a) the supposition that the real world ultimately consists of facts, and (b) the further assumption that a proposition, which copies the formal structure of a fact, expresses this fact through direct denotation of the constituents of the fact by the respective constituents of the proposition. These two premises, I believe, are incompatible, for they give rise to a genuine paradox.

The genesis of this modern rationalist antinomy is, briefly, as follows: The world is composed of atomic facts, and atomic facts are directly composed of objects—ultimate, simple objects.⁵ There is no form over and above the particular way the objects hang together, no universal factor which combines the particular objects. Therefore an atomic proposition, if it were to mirror an atomic fact, ought to do this by combining the names of objects in a way analogous to the way the objects themselves are combined in the fact.⁶ That is, if the fact is atomic, the proposition should be entirely singular. All its constituents should be names. "By means of names alone the thinker can form what we may call atomic sentences. . . . If *a*, *R* and *b* are things which are simple in relation to his language, i.e., of the types for instances of which he has names, he will believe that *aRb* by having names for *a*, *R* and *b* connected in his mind and accompanied by a feeling of belief."⁷ But there is no language known to us that supplies names for things of the type *R*. All names of relations (and properties, which may be treated as monadic relations) are general names—they refer, at best, to classes of instances, not to instances directly. If it is true that "a character characterizing a concrete thing or individual is as particular as the thing or individual which it characterizes,"⁸ to which

⁴ This is a criticism of the third order; and, if we take Aristotle's fallacy of subject-predicate construction, which Mr. Russell criticized, as the "atomic" fallacy, Mr. Russell's first-order criticism is a second-order fallacy, and so forth, so that mine is a criticism of the third, and—presumably—a fallacy of the fourth order. Compare P. E. B. Jourdain's "Hierarchy of Jokes," in *The Philosophy of Mr. B*rrtr*nd R*ss*ll* (p. 81); assuming that Aristotle himself is not to be taken seriously, this foot-note would be a joke of the fifth order, which may be boasted as an accomplishment.

⁵ Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, 2.01: "An atomic fact is a combination of objects (entities, things)."

2.02 The object is simple.

2.021 Objects form the substance of the world. Therefore they can not be compounded."

⁶ *Ibid.* 4.0311 "One name stands for one thing, and another for another thing, and they are connected together. And so the whole, like a living picture, presents the atomic fact."

⁷ F. P. Ramsey, "Facts and Propositions," *Proceedings of the Aristotelian Society*, Suppl., Vol. VII, p. 160.

⁸ G. F. Stout, "The Nature of Universals and Propositions, Herz Lecture, *Proceedings of the British Academy*, Vol. X, p. 4.

I think Mr. Ramsey, as a protagonist of "atomic facts," would have agreed no matter how else he differed from Professor Stout, then our assertions never really express an atomic, i.e., a perfectly non-general, fact.⁹ Thus, if we are going to accept both the doctrine of atomic facts and the Wittgensteinian theory of meaning—the two premises stated above—we shall be faced with a paradox: a fact whose factors are all particulars, is represented by a proposition whose factors separately denote the items that compose the fact, but the factors of the proposition do *not* all denote particulars.

Whenever we meet with a genuine paradox in philosophy, we may know, of course, that we have reasoned from false premises. Their falsity, however, may be a matter of incomplete or awkward conception rather than a definitely wrong assertion. Often the very formulation of the primitive propositions involves another assumption which is not recognized at all. Such, I think, is the case with the logico-metaphysics of Bertrand Russell, G. E. Moore, Ludwig Wittgenstein, and the younger group of logicians who have turned their attention to this woeful world of fact. The tacit premise of which they are not aware is, that a *complete analysis* is always exhaustive of the *possibilities of analysis* in its object. And this is the axiom which I believe is false.

The nature of analysis is not sufficiently understood. Analysis applies only to *conceptual constructions*, which are not simply realities, but are forms of realities. Any reality that appears under such a form is a specially *formalized* reality. It must, of course, appear under some form, if it enters experience; it must be somehow construed. Under *no* form it could not be apprehended at all. But analysis is always *of the form*, which is abstractable from its content; therefore every analysis involves abstraction. The given content, the reality, might conceivably have some other form; for the structure of an experience, i.e., the way we logically see it, depends upon our "logical language." This is a somewhat difficult concept, but it is vitally important for the meaning of "fact."

We have all heard a good deal about the relativity of all knowledge, the limitations of logic, etc., but just to what our knowledge is relative, or exactly what are the limits of logic, has never been clearly demonstrated by philosophers. It is, indeed, a task for logicians. The only definite treatment of it that I know is in the work of Professor Sheffer, who has worked out in great detail just how any statement whatever is relative to what he calls a "language-function," or "base."¹⁰ The fundamental thing about *language*, which

⁹ Cf. C. H. Langford, *op. cit.*, p. 444: "We have seen that a non-general fact corresponding to a general fact like the one expressed by 's is green' can be described, but apparently can not be expressed."

¹⁰ "The General Theory of Notational Relativity," an unpublished paper in the Harvard University Library. See also the paper on "Notational Relativity" in the *Proceedings of the International Congress of Philosophy*.

embodies our *principles of conception*, is the way it divides any material whatever into terms and relations. Bertrand Russell explained, in one of his semi-popular essays, that besides the constituents in a proposition there is a further element, the relationship or structure, which is not another ingredient, but is the way the constituents are put together. We must carry this analysis a step further; the types of relationship which are exemplified in a proposition depend upon a certain way in which the subject-matter is construed. Constituents and relations alike depend upon a particular logical formulation of a system, and this initial conception, the primitive notions, form the "logical language." There are types of logical language, which yield various types of system; but all systems and forms of system may be reduced to a highly abstract level wherein all types of relation appear merely as special, more or less arbitrary formulations. Thus in the last count no structure is absolute, no relation peculiar to the material in hand, no analysis of fact the only true one. Furthermore, Professor Sheffer has shown that all relation-forms (dyadic, triadic, etc.) have a common logical character, and may thus be brought into definite relations with each other, at some level of abstraction. The pursuit of these abstractions is arduous, but the moral at least is clear: if it can be proved for logic that its most precious concepts are not ultimate, surely we may not assume in metaphysics that these same concepts are reflections of some absolute character of Reality! The truth is, that every analysis of fact really presupposes a construction upon that logical level where specific types of relation appear. Mathematical logic has not yet penetrated below this level; but I think it has been shown that it *can* penetrate further, so that to assume that a translation of a fact into a proposition, i.e., a translation from one language into another on exactly the same "base," is the ultimate analysis of reality, is very likely to lead us into profound misunderstanding.

Thus the way a situation may be analyzed is always relative to the terms in which it was originally conceived. But since there is more than one possible "base," there is more than one way in which one and the same reality might enter into experience; and for this reason, we might have a completely explicit statement, or complete analysis, of the reality as we conceive it (and our conception may be absolutely correct), and yet not exhaust the *formal possibilities* of our object. Just as in speech we must express ourselves in just one particular language, and can never invent any Esperanto, Interlingua or Volapük which shall give us *the* expression of a thought, (for any such language is just another example of "Language"), so there is no logical formulation which renders *the* form of any reality. Let us apply these considerations to propositions.

Every proposition is a "picture" in Wittgenstein's sense, of some alleged fact; and the constituents of the picture are terms and relations. Thus the propositional rendering of a fact makes the fact analyzable *as a complex of terms in certain relations*. But does it follow, from the possibility or even the human necessity of thus construing an experience, that there is nothing more to it, or let us say, *behind* it, than terms and relations? Is the explication of the form of a thing an actual division of the thing into its constituent parts? I think not. It is, I believe, a common fallacy to confuse the ultimate products of analysis with the necessary elements for synthesis: to suppose that, because a line can be analyzed into an infinity of unextended points, therefore an infinite number of unextended points can *compose* a line; or that, because the ultimate products of a certain psychological analysis are sense-data, our experience of the world is compounded of sense-data. We know, however, that an infinity of points will not in itself produce a line, because the points are abstractions—locations *on* the line, not parts of it: and that sense-data, to the sorrow of the greatest Scotch philosopher, can not be synthesized to yield an intelligible universe.

An obvious answer to this reflection is, that the examples quoted are not chosen in good faith, because they are abstractions from their objects, and do not take in the whole form of the object. But the point I wish to make is that all analyses are abstractions of varying degrees, and are relative to some intellectual purpose. In the case of the points on a line, the abstraction is obvious; for the analysis of a line into an infinity of points is sufficient, and therefore correct, for the purpose of establishing its relations to other parts of space, but not for establishing the line itself in the Euclidean system; the limits of the concept are discoverable even within the geometric structure. Likewise—though it took philosophers some centuries to realize this, and some are not convinced of it yet—the abstraction of sense-data from experience may be sufficient for some purposes of psychology, but not for metaphysics. Less obviously yet, but just as truly, may it not be that the analysis of a "fact," the conception of an event in the propositional form of *entities in relation*, is adequate to the purpose of *understanding* it, but not of *duplicating* it in experience?

Every experience is an interpretation, a formalization. Living experience may come to us in most various forms—it must come in *some* form, of course, if we are to identify it at all as a particular "fact." But the form which an actual event takes for us, the fact we apprehend, is not necessarily *the* form which belongs to it. What we can experience is a *perspective*, a "*Gestaltung*." And any analysis we can make of reality is an analysis of such a perspective, or special form—all our understanding is perception of some specific

configuration. The "Werwolf" of ancient superstition could appear as wolf or woman or other living creature, and remain the same "Werwolf," but there was no form that was its "real" embodiment; similarly, a proposition expresses a true and sufficient formulation of an actual event, but it is an analysis of form, and therefore of a perspective only; not a division of the concrete event into its constituents. That is why even a complete analysis of a "particular" into perfectly clear concepts can not be reversed, so that the particular could be reconstituted by synthesis of its conceptual ingredients. That is why the ideal logician whom Leibniz imagined could never put together all the notions he derives from, let us say, the analysis of some particular chair—*this* color, *this* shape, *this* time and place—and by their synthesis reproduce a chair which he could sit on. The only objects that can be reconstructed synthetically from the products of analysis, are conceptual objects, such as the objects of mathematics, for their whole being is to be conceivable; they depend not only for their intelligibility, but for their existence, upon a logical "base."

The confusion of existent things with their formulation in experience—of the "Werwolf" with his particular incarnation—has given rise to the idea that facts are both the actual constituents of reality, and the content of propositions. It led Mr. Russell, once upon a time, to dream of a proposition which "unless it happens to be linguistic, does not itself contain words; it contains the entities indicated by words."¹¹ This appears to have been the logic of the Greeks, too, at least as the poet Aristophanes understood it; for was not Euripides defeated upon this principle by his rival, Aeschylus?¹²

¹¹ *Principles of Mathematics*, p. 47.

¹² Aeschylus: What I want is to bring him to the balance;
The one sure test of what our art is worth!

Dionysius: (who has been called upon to judge between them):
So that's my business next? Come forward, please;
I'll weigh out poetry like so much cheese!

..... (A balance is brought in)
Now, each take hold of it, and speak your verse,
And don't let go until I say "Cuckoo!"

Aeschylus and Euripides: We have it.

Dionysius: Now, each a verse into the scale!

Euripides: "Would God no Argo e'er had winged the brine!"

Aeschylus: "Spercheios, and ye haunts of grazing kine!"

Dionysius: Cuckoo! Let go.—Ah, down comes Aeschylus,
Far lower.

Euripides: Why, what can be the explanation?

Dionysius: That river he put in, to wet his wares,
The way wool-dealers do, to make them heavier!
Besides, you know, the verse you gave had wings.

(From *The Frogs* of Aristophanes, transl. by Gilbert Murray.)

If only our modern academicians would all accept the classical theory of propositions, how convenient it would be to let the realists take hold of one side of the balance, the idealists, conceptualists, or other abstraction-mongers of the other, and see what would happen to epistemology!

The Greeks presumably derived the peculiar doctrine of propositions through their confusion of symbol and meaning, words and things; the logicians of our day are too sophisticated for such a simple error, but they have reached the same result by a more subtle mixture of ideas. That is the mistaking of *particular facts* for *events*. Facts, as we have seen, are propositional in form; true propositions are simply expressions of fact. I think Professor Lewis's conception of "false facts"—whether we accept it as a working notion or not—certainly has demonstrated that the notion of "fact" is really the hypostatization of a proposition. But then, if we still maintain that facts are composed of objects and are the fundamental ingredients of the world, does it not inevitably follow that real objects, not concepts, are expressed in propositions?

The answer is, obviously, that facts are not complexes of real objects, and metaphysically final constituents of the world. They are not *events*. A fact is that which is expressible in a proposition, and is a *perspective of an event*. As such, it is always an abstraction, involving one of the possible formulations of the event. No matter how detailed it may be, it is still formal, i.e., dependent upon some "logical language." A particular fact is a complete formulation, a general fact is a selection of certain features which this formulation can render; a negative fact is simply a structure which is automatically determined whenever some other form is distinguished from the general system—it is the background, the portion of the system rejected by the definition of a form. All the positive and negative *facts* which can be simultaneously asserted of an *event*, constitute its presence in a universe of discourse. Thus *an event as it fits into a universe of discourse, i.e., into a logical universe, is a particular fact*.

If we distinguish between events and particular facts as here suggested, treating the fact as a logically construed event, I think not only that many difficulties about singular propositions, inexpressible particulars, etc., will disappear, but that the close kinship between facts and events on the one hand, facts and propositions on the other, will become clearly definable.

There are general and particular, positive and negative facts;

there are no past, present, or future facts. A correct statement of a contingent fact must include a certain date, and the matter thus stated simply is, was, and ever shall be a fact. A completely explicit proposition, if it is ever true, is always true. Events, on the other hand, are past, present, or future; and there are no general and no negative events. Events, like things (which Professor Whitehead has significantly classed as continuous events), can not be *expressed*, but only be *referred to* in a proposition. *Facts* are what propositions express. (Thus propositions are concepts, the formulated bits of reality to which they apply are facts, the symbols that suggest the concepts are things, the process of symbolization itself is an event.) Since general concepts may fit reality, there are general facts—facts which refer to more than one event; and since concepts may be highly selective, there may be many propositions about, hence many facts referring to, any single event, even within one logical system. This last point has been emphasized by G. E. Moore, who makes it quite clear that there is such a distinction, but seems to lose it again in the course of the same article ("Facts and Propositions") when he defines a class of facts which are supposed to express particular relations between particular instances of things. He seems to be unaware of having lapsed into the very confusion which he had just pointed out, though he does realize that his construction is unsuccessful; for he remarks, concerning facts of this class, "It is, I think, worth noticing that none of them, so far as I can see, could possibly be expressed in any actual language; perhaps, even none could be expressed in any possible language."

As long as we are not aware of the possibility of fundamentally different event-formulations, different principles of structure, referring to one and the same event, the idea of an event as something more than a strictly particularized fact must, of course, be hard to negotiate. As soon as we do grasp this conceptual relativism, however, an event may be thought of as a matrix giving rise to atomic propositions (atomic, as Ramsey has remarked, in respect to a certain language). Now we see why logicians have been so deeply puzzled over the question: Do two equivalent propositions express the same fact, or do they not? Does "Socrates was the husband of Xantippe" assert the same fact as "Xantippe was the wife of Socrates?" If they express the same fact, i.e., have the same content, wherein do they differ? The principal relation in such a proposition may be converted, the whole proposition thus replaced by another, *one fact substituted for another*, yet the reference to "reality" remain the same. Many relational structures may be derived from the same event; there certainly are relations, but I think it is highly probable that they occur only in perspectives. Facts are such per-

spectives of events; facts are essentially relational in structure, not accidentally, as Mr. Ramsey holds; universals are not an accidental peculiarity of word-languages, but an essential characteristic of "logical languages" and of facts. What terms and what universals we shall have, remains indeed a function of our particular intellectual slant. But the structure of propositions really is analogous to the structure of facts—I think Mr. Wittgenstein's analysis of meaning, expressed in the words: "We make ourselves pictures of facts," etc., is probably correct. But it is only with reference to what he himself would call a "projection" that we could say, "The world is everything that is the case," for only with such reference can there be any "case." Only an entire universe of discourse, not the universe, can be "the totality of atomic facts," except in some particular logical frame, some "projection" or "perspective" or "logical language," there is no such totality. Our understanding of the world may be perfectly genuine, our propositions may refer to events, and contain factors which denote real things; but the proposition as a whole can denote only a *fact*, which is a formulation, and involves an abstraction. All experience is in a very definite sense logical or abstract. That is why there are no propositions which express events in the world; events can merely be denoted, and the only symbols equal to this task are unanalyzed proper names.

SUSANNE K. LANGER.

RADCLIFFE COLLEGE.

BOOK REVIEWS

Contemporary Idealism in America. CLIFFORD BARRETT, editor.
New York: Macmillan Co. 1932. Pp. 326.

Contemporary Idealism in America includes essays by eleven writers and a preface and an introductory chapter by the editor, Professor Barrett. Its dedication is to the memory of Josiah Royce, Professor George Herbert Palmer writing with appreciative feeling the dedicatory first chapter. Its purpose is "to offer interpretations of issues of fundamental consequence in the present order of thought and action" (p. 14).

Professor Barrett indicates the "definitive characteristic of idealism" as the assertion of the "primacy of 'spirit' in the world" (p. 16). Part of the meaning of this phrase, he says, is that "whether in the considerations of metaphysics or logic or ethics, or elsewhere, the idealist finds the immediate and partial incapable of rendering a full account of itself, but discovers that its essential nature is to be understood only in relation to the more inclusive order which it articulates in nature and behaviour" (p. 20). Pro-

fessor Bakewell ("Continuity of the Idealist Tradition") finds that "in the first stage in the development of philosophy reality is viewed primarily as stuff, in the second as form, in the third, through emphasis of end or purpose, as spirit (soul or entelechy)" and that "all idealisms deserving the name undertake to explain experience from the standpoint of what I have called the third stage of knowing" (p. 36). Professor Urban ("The Philosophy of Spirit") agrees with Professors Barrett and Bakewell that idealism is "in its totality a philosophy of spirit," and emphasizes the point that this primacy is epistemological as well as ontological: we can not know the real unless we use the category of spirit (pp. 108-109). Professor Hocking ("The Ontological Argument in Hocking and Others"), using Santayana as a foil, as Royce did, gives us a modernized interpretation of Anselm's argument, and seems to agree with Royce that this argument contains "in some form the central doctrine of idealism" (p. 45). Professor Cunningham ("On the Meaning-Situation") attempts an analysis of "empirical meaningsituations" (p. 80); this sort of analysis he regards as "an indispensable prolegomenon" to any clear-cut consideration "of the issue at debate among those traditionally called realists, idealists, and pragmatists" (p. 100). He concludes that as an element in an empirical meaning-situation, "mind in some sense must remain" (p. 84). Professor Leighton ("The Principle of Individuality and Value") concludes that of the "two consistent ultimate philosophies," Materialism and Personal Idealism, "I elect personal idealism, as a hypothesis based on the evident individuation of the empirically real and a postulate based on the faith that the Cosmos must have Meaning and must honor Value" (pp. 166, 167). Professor Brightman ("The Finite Self") applies "the conception of organic wholeness, which is the cardinal principle of idealism, . . . to the problem of the self" (p. 181). Professor Boodin ("God and Cosmic Structure") believes that "modern idealism has been afflicted with psychologitis, and in spite of its great contribution to the interpretation of human institutions, it has failed to connect with the main currents of modern thought" (p. 206). Nevertheless his own thought is based quite idealistically on the "faith that however confused and discordant the life of the world may seem, there is ever present, like a Pilgrim Chorus, the eternal harmony of the Spirit of the Whole" (p. 216). Professor Tsanoff ("The Theory of Moral Value") asks, "What is the sort of cosmology that can make sense both of physics and ethics?" He replies that it must be a "thoroughly philosophical view of reality" (p. 225), and remarks that "materialistic ethics is pure irrelevance" (p. 226). Professor Hendel ("The Meaning of Obligation") finds that though "au-

thority," "sovereignty," and the "general will" have all had their day, "obligation" is now "the most significant idea in modern ethics, without which we could not express to ourselves the ideal meaning which life seems to have" and that "the presence of this ideal character in our experience discloses where idealism must take a stand" (p. 294). "In the order of human experience, ideals seem to be before they exist" (p. 295). Professor Hoernlé ("The Revival of Idealism in the United States") finds that whereas Naturalism and Realism interpret experience or mind as a natural phenomenon, i.e., as within nature, the "way of idealism" is to interpret "nature as a factor within experience" or mind (p. 313). He also shows why he believes that Dewey and especially Whitehead may be said to be helping to "revive idealism" and adds that the latter thinker has made the paramount contribution of substituting "a creative Absolute for the static Absolute of his Idealist predecessors" (p. 326).

To the reviewer these essays by "contemporary idealists" are uneven in value. Some do not do their writers justice. Some do not do idealism justice. Others are enlightening and stimulating. Of the latter sort are Tsanoff's short and admirable analysis of the metaphysical implications of the facts of the moral consciousness, and Hendel's long but admirable study of political and ethical concepts. Professor Hocking reveals his usual subtle and sure touch in dealing with an old problem in the now popular terms, essence and existence. Professor Hoernlé provides in his essay the best example of that "synoptic thinking" that characterizes the philosophy of Plato, Hegel, and Bosanquet. His treatment of the thought of Dewey and Whitehead is no arbitrary effort to force neutral or non-idealistic thought into an idealistic mold; it is a genuine reading entirely consonant with, and indeed demanded by, the point of view of speculative philosophy. "It takes certainly all sorts of philosophizings to exhaust the self-disclosures of the world in experience" (p. 315).

Professor Barrett says in his introductory remarks, which I think excellent but too brief, that the book intends "neither defense nor propaganda"—of idealism. Nevertheless *Contemporary Idealism in America* has to do, as I have indicated in the foregoing, with the nature of philosophical idealism as well as with individual views on "contemporary issues." Idealism will be judged by the book. And there is much in it that is valuable to the reader and student of philosophy, much that our realisms and our pragmatisms and our naturalisms do nothing, and can do nothing, to supply. On the other hand, regarding the volume as a whole, I do not think that even a sympathetic critic can give unqualified approval to it as an expression of contemporary idealism. There is evident not infre-

quently a lack of care in expression. There is a loose and ambiguous use of terms, a serious fault in the presentation of a philosophy one of the chief concepts of which is—meaning. There is occasionally a tendency to trade on the historical reputation of idealism, even on the connotation of words. There seems to be some uncertainty as to whether idealism should follow science (even pseudo-science), ignore it, or as to what its attitude should be. Professor Bakewell writes, truly enough, that the “agreements [among idealists] are far more important and more profound than the differences, and they give continuity to the idealist tradition.” But what, more precisely, is the idealist tradition? How much agreement on this question would be found in the answers given to it by the contributors to this book? Professor Hoernlé’s belief, which the reviewer shares in part, that Whitehead and Dewey are helping to revive an idealism in “eclipse” might imply that idealists, *eo nomine*, are—well, of different kinds.

Coöperative effort, however, is good. And a new effort by idealism in this present age to “state itself all over again” in term of first principles would be very worth while. I hope the present volume will be but the beginning of an attempt by American idealists to clarify in systematic, detailed fashion the meaning and the personal and social significance of a philosophy that can do justice to religion as well as to science, to art as well as to the need for social justice, to Theoria as well as to the practical life. For the whole externalized, disintegrating Western World today presents to philosophy in general and to idealism in particular a challenge more urgent and more difficult to meet than the narrower challenge given to Kant and Fichte and Hegel by eighteenth-century Germany, or to Plato by fourth-century Athens.

The book has no index. There are a half dozen typographical errors (pp. 28, 45, 113, 140, 173, 206), one of which makes Professor Boodin say that idealism emphasizes the “whoseness” of reality.

CONNECTICUT COLLEGE.

FRANK E. MORRIS.

The Heavenly City of the Eighteenth-Century Philosophers. CARL L. BECKER. New Haven: Yale University Press. 1932. Pp. vii + 168.

In four brilliant and erudite lectures, Professor Becker gives specific content to a theory somewhat in vogue among historians at present—the theory that the influence of medieval thought on so-called modern minds was greater and more persistent than has been generally supposed. He develops the following thesis: certain men of letters of the eighteenth century were much influenced by Thomis-

tic theories, though eighteenth-century modifications of these earlier conceptions obscured the debt.

Of thirteenth-century thought Dr. Becker says: "Paradise lost and paradise regained—such was the theme of the drama of existence as understood in that age; and all the best minds of the time were devoted to its explication" (p. 10). They desired passionately to present a logical platform for their faith and the result was a "climate of opinion" unhampered by facts. Unwittingly, philosophers of the eighteenth century were influenced by this "climate of opinion." But they shifted the Heavenly City to earthly foundations. They deified nature. They became enthusiastic about the amelioration of society. The "new history" sought presumably to reveal "the constant and universal principles of human nature" (p. 98), but really to apply to events "the ready-made judgments of the age of reason" (p. 109), and especially to show that Christian philosophy was hostile to human welfare (*cf.* p. 108). "For the love of God they substituted love of humanity; for the vicarious atonement the perfectibility of man through his own efforts; and for the hope of immortality in another world the hope of living in the memory of future generations" (p. 130). Great reverence was shown for posterity (*cf.* p. 142). Such is the substance of Mr. Becker's delightful book.

Though Mr. Becker questions the modernity of aspects of eighteenth-century thought because he finds evidence of over-rationalization, the chief defect of his book is just this tendency. Among the reasons for such a criticism of so excellent a book are the following. Mr. Becker's statement—quoted above—of the problem of the thirteenth century does injustice to the diversity of the thought of the period and especially to the contribution of Roger Bacon, yet he was one of those "best minds." Again, Mr. Becker believes that he shows "that the underlying preconceptions of eighteenth-century thought were still . . . essentially those of the thirteenth century" (p. 31), yet his discussion is much narrower in its scope. (*Cf.* the statement given above of the theme actually developed.) Furthermore, Mr. Becker fails to consider the views of Berkeley and Kant. This is permissible in view of Mr. Becker's definition of *Philosopher* (*cf.* pp. 34-35); yet he sometimes uses the term with its ordinary connotation—this is the case when he pokes fun at present-day philosophy. One wonders whether the definition—if such it may be called—was adopted for the purpose of excluding thinkers like Berkeley and Kant. In short, Mr. Becker seems to have formed his theory first and then sought facts to support it.

In the second place, certain emendations of the book are necessary for accuracy. Thus, the rational justification of faith began

when Christian thinkers were first interrogated by Greek seekers after truth and not, as Mr. Becker suggests, in Dante's time (*cf.* p. 9).

Mr. Becker implies that the shortcomings of reason were appreciated only midway in the age of reason (*cf.* p. 84); yet Locke inaugurated this age by indicating the limitations of the human understanding. He was applauded by Voltaire for his willingness to "stop where the torch of the physical sciences" failed him. Locke held that our knowledge is relative in that we can not know first causes, but that it is commensurate with our needs. This view was adopted by his followers, and it was especially important in the theories of Voltaire and Diderot. It is substantially the view that we may learn to use things without understanding their "underlying agencies"—a standpoint regarded by Mr. Becker as a distinguishing mark of our own time (*cf.* p. 23). Moreover, Locke did not think of the mind merely as a *tabula rasa*. He said, "Let us then suppose" such to be the case. But many passages indicate that he viewed the mind as active in interpreting its experiences. It is, then, in Locke's view, more than "a record made by that outer world" (p. 65).

Contrary to Mr. Becker's surmise, Hume did not exhaust the dialectical approach to knowledge (*cf.* p. 77). He showed the limitations of a strictly empiricistic philosophy. Moreover, not Cartesian logic but Hume's empirical theory was influential in developing the theory eliminating the soul from the individual (*cf.* p. 87).

From citing certain of the cases in which Mr. Becker's allegations do not square with the facts, we turn to the indication of some of his statements that call for further explication. His disdain of philosophy seems based on the assumption that the metaphysician is uninterested in facts (*cf.* pp. 18 and 20). But the following assertions are made: "Physics . . . has been transformed . . . into the most metaphysical of disciplines" (p. 24); "physicists . . . stick to ascertainable facts" (p. 26). Furthermore, Mr. Becker talks of "brute," "irreducible," "stubborn" facts. Now one may say that facts *are*, but when he posits stubbornness and irreducibility and brutishness of them he is using abstractions and making assumptions that go beyond his data and suggest the type of metaphysical procedure deplored by Mr. Becker and all good philosophers. Again, Mr. Becker suggests that reason and fact may profitably part company (*cf.* p. 21). But a fact's very existence is apparent only as it is apprehended by reason. As a philosopher, who finds eighteenth-century thought too limited by the empiricistic standpoint, has said: "The simple phenomena of experience are not self-explanatory."

In spite of its many excellencies, the book demonstrates the fact that in one modern scholar the love of abstract speculation still persists.

MARJORIE S. HARRIS.

RANDOLPH-MACON WOMAN'S COLLEGE.

Geschichte der Naturphilosophie. HUGO DINGLER. Berlin: Junker und Dünhaupt Verlag. 1932. Pp. vii + 174.

This brief history has been written with an intent to illustrate the slow march of thought from magic and superstition to its author's latest views as to the nature of scientific first principles. Professor Dingler, upon whose early writings Mach showered his blessings, believes modern theoretical physics to be simply a convenient computational device, radically different from the "genuine" physics of machine-shop and laboratory. He thinks modern students are mistaken in rejecting an absolute *a priori* foundation for the positive sciences. For he believes a careful examination of the processes of instrument construction and measurement shows that Euclidean geometry and Newtonian physics are the necessary bases for experimental physics, and so for the theoretical superstructures erected upon it. But he combines this a priorism with a voluntaristic pragmatism, according to which universal laws of nature are no more than ideal "demands," which we progressively impose upon the flux in the interest of human welfare. To be sure, there are other kinds of natural laws, he admits; but these are not universal or *a priori*, and are apprehended by us without the use of measuring instruments. And so Dingler views the history of science as gradually passing from regarding its universal laws as either objective characteristics of things or merely subjective ideas, to viewing them as objective operations we carry out upon things.

The limitations of this philosophy of science are evident, since the inevitable questions arise why we can operate upon the flux in certain ways, and why, in any case, a set of operations different from the traditional ones can not be taken as primitive in the exploration of nature. But this is not the place to ask them. Nevertheless, Dingler could have written a valuable book if he had consistently discussed the history of science from the point of view of his philosophy. This he has done only in spots, so that most of the book is material to be found in any fair-sized history of ancient and modern philosophy. Much of it reads like a catalogue, since ideas are reported without considering the arguments and methods used to support them. On the other hand, he has taken advantage of recent work in the history of science, and shows among other things the crucial rôle Nicholas Oresme played in the development of sciences

dealing with measurable properties of changing things. The brief discussion of Galileo should help destroy the common view that he was an empiricist in any current usage of the word. Dingler also makes clear the relevance of the traditional discussions concerning universals and the soul to contemporary studies of the nature of laws; and he emphasizes the importance of technological advances (e.g., glass blowing) in making possible modern science. His comments on the elimination of forces and causes from mathematical physics, and on the confusions arising from new ideas being stated in language associated with older conceptions are very suggestive; and his criticisms of contemporary formalists for neglecting the operational aspects of physics are well taken. But it is a pity he has not raised the question of the incidence of neo-platonic cosmological speculations upon the specifically mathematical-physical procedures of the great founders of modern science.

ERNEST NAGEL.

COLUMBIA UNIVERSITY.

JOURNALS AND NEW BOOKS

REVUE DE METAPHYSIQUE ET DE MORALE. 40^e Année, No. 1. Les deux pôles foyers d'origine, avec introduction par J. De Gaultier: R. Quinton. Quelques remarques sur les mathématiques intuitionnistes. A propos de plusieurs notes de M. Heyting: A. Errera. L'Astrobiologie et la pensée de l'Asie: Essai sur les origines des sciences et des théories morales (*suite*): R. Berthelot. Le droit des peuples à disposer d'eux-mêmes (*suite et fin*): Th. Ruyssen.

JOURNÉES D'ÉTUDES DE LA SOCIÉTÉ THOMISTE. Volume I. La Phénoménologie. Kain (Belgique): Société Thomiste. 113 pp. 15 fr. (This is the report of a discussion held at Juvisy, September 12, 1932, and contains papers by R. P. Daniel Feuling on "La Phénoménologie en Elle-Même" and by R. P. René Kremer on "La Phénoménologie Comparée avec le Thomisme"; also abstracts of various communications on the subject.)

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XIV, Seconda Serie, Volume I, Fasc. I. Che cos'è filosofia: V. Arangio-Ruiz. Attualismo costruttore: U. Spirito. Eternità e infinità del tempo in Aristotele: R. Mondolfo. Scienza e fede secondo il Blondel: F. D'Amato.

CRITERION. Any VIII, Num. 31. L'Església i l'Estat segons Francesc Eiximenis: Martí de Barcelona. Schizzo sulla filosofia contemporanea: Romualdo Bizarri. Les bases metafísiques del creure: Miquel d'Esplugues. Entre la filosofia i les matemàtiques: Josep Orriols. Les directrius filosòfiques d'Antoni Comelles i Cluet: Jaume Sarri.

Amante, Lina: *Il Problema degli Spiriti Finiti in Berkeley.* (Pubb. della Scuola di Filosofia della R. Univ. di Roma, V.) Roma: Tipografia del Senato. 1932. 51 pp.

Balfour, Arthur James: *The Foundations of Belief. Being Notes Introductory to the Study of Theology.* Reissued. New York and London: Longmans Green & Co. 1933. xxxvi + 399 pp. \$1.50.

Calogero, Guido: *Studi sull'Eleatismo.* (Pubb. della Scuola di Filosofia della R. Univ. di Roma, III.) Roma: Tipografia del Senato. 1932. 264 pp.

Condorcet: *Esquisse d'un Tableau Historique des Progrès de l'Esprit Humain.* Texte revu et présenté par O. H. Prior. (Bibliothèque de Philosophie.) Paris: Boivin et Cie. 1933. xxiv + 239 pp. 20 fr.

Dante: *De La Monarchie.* Introduction et Traduction de B. Landry. (Textes et Traductions pour servir à l'Histoire de la Pensée Moderne.) Paris: Félix Alcan. 1933. viii + 196 pp.

Ferro, A.: *La Filosofia di Platone.* Dai Dialoghi Socratici a quelli della Maturità. (Pubb. della Scuola di Filosofia della R. Univ. di Roma, VI.) Roma: Tipografia del Senato. 1932. 267 pp.

Hook, Sidney: *Towards the Understanding of Karl Marx. A Revolutionary Interpretation.* New York: John Day Co. 1933. xiv + 347 pp. \$2.50.

Junod, Robert: *Frédéric Raub.* Essai de biographie intellectuelle. Geneva: A. Jullien. 1932. 240 pp.

Lambry, Robert: *Le Dessin chez les Petits.* (Les Sciences et l'Art de la Education.) Juvisy: Les éditions du Cerf. 1933. 188 pp.

Pallièrè, Aimé: *Bergson et le Judaïsme.* Paris: Félix Alcan. 1933. 44 pp.

Rogers, Arthur Kenyon: *The Socratic Problem.* New Haven: Yale University Press. 1933. London: Humphrey Milford, Oxford University Press. iv + 200 pp. \$2.00.

Sérouya, Henri: *Spinoza. Sa vie et sa philosophie.* Paris: Éditions Excelsior. 1933. 83 pp. 20 fr.

NOTES AND NEWS

The Hegelian International League, founded in the spring of 1930 at the Hague, on the occasion of the First Congress, now calls the Third Hegelian International Congress, in collaboration with the Italian Institute of German Studies in Rome. The Congress will be held in Rome at the seat of the Institute (Villa Sciarra-Wurts on the Janiculum) from the 19th to the 23d of April, 1933. The

first Congress had the particular end in view of determining the conditions of Hegelian studies in the various European countries; the second Congress, held in Berlin in the autumn of 1931, celebrated the centenary of Hegel's death and critically studied his works; the present Congress will be devoted to the study and discussion of Hegelian thought. French, English, Italian, and German will be the official languages of the Congress. The following are some of the papers to be read:

Der Uebergang vom rationellen Denken zum dialektischen Denken im Sinne Hegels: *A. J. Bergsma*; L'interpretazione hegeliana della dialettica platonica: *G. Calogero*. Il metodo della Fenomenologia dello Spirito: *S. Caramella*; L'influence des idées de Hegel dans la pensée et l'histoire de Cuba: *De. Bustamante*; Hegel e il pensiero italiano: *G. Gentile*; Das Problem eines Lexikons der Hegelschen Philosophie und seine Lösung: *H. Glockner*; Die Entstehungsgeschichte der Phänomenologie des Geistes: *Th. Haering*; Die Geschichte als der frei für sich werdende Geist: *J. Hessing*; Der Bildungsbegriff Hegels: *W. Moog*; Il conoscere e i suoi diversi momenti nella concezione gnoseologica di Hegel: *U. Redano*; Die Geschichte als Gottesgericht: *B. Telders*; Hegel und die Aufklärung: *D. Tschizewskij*; Der dialektische Zusammenhang einiger wichtiger physikalischer Naturegesetze: *B. Wigersma*; La teorie della conoscenza di Hegel: *A. Zoltowsky*.

Information may be obtained from the secretary of the congress, Prof. Guido Calogero, Villa Sciarra-Wurts, Rome, Italy.

Professor Howard D. Roelofs has been appointed Dean of the College of Liberal Arts at the University of Cincinnati. Dr. Roelofs went to the University in the fall of 1932 as Head of the Department of Philosophy.

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On the Existence of a Necessary Being. JEROME GASPARD.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 2. January 19, 1933.

Dr. Whitehead on Perception. DANIEL CORY.
The Development of James's Pragmatism Prior to 1879. MAURICE BAUM.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 3. February 2, 1933.

Word-Portraiture. VIRGIL C. ALDRICH.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 4. February 16, 1933.

Non-Being. RAPHAEL DEMOS.
Report of the Ninth Annual Meeting of the Pacific Division of the
American Philosophical Association. DONALD C. WILLIAMS.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 5. March 2, 1933.

A Case of the Pathetic Fallacy. D. W. PRALL.
Logic as Language Habits versus Logic as Formal Truth. MARIE SWABEY.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 6. March 16, 1933.

Immediate Empiricism and Unity. BRUCE W. BROTHERSTON.
Report of the Thirty-second Annual Meeting of the Eastern Division
of the American Philosophical Association. J. W. ROBSON.
Book Reviews. Journals and New Books. Notes and News.

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- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
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Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00. 720 pages annually. Psychological literature.
Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
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THE JOURNAL OF PHILOSOPHY

THE OBVIOUS IN ESTHETICS. I¹

I

"THE world contains no people so crude in culture that they lack a decorative art. Almost the earliest remains of our cave-dwelling ancestors in Europe are bone implements incised with marks in regular sequence which serve no utilitarian purpose, but present a surface more pleasing to the eye than a plain expanse of undecorated bone. This is the earliest known art. Like language and social organization, art, the embellishment of objects and activities beyond the requirements of their ostensible purposes, has accompanied man since the dawn of history. Its origin is veiled in mystery; it lies behind the earliest known records. Whatever it may be, to whatever biological or psychological need of the organism art is the response, it must be recognized as one of the most constant forms of human behavior."²

Notice that the art Miss Bunzel talks about is decorative art. The origins, the motives of this decorative art, as we find it in primitive Australia and in prehistory, are, as she says, veiled in mystery; but in more modern cases we have here very often something like the artist's signature. If the object be a clay pot or a basket, as mere pot or basket it might be by anyone, but in so far as it is a basket or pot of exceptional perfection and craftsmanship, or decorated with lines or pictures of the maker's choice, it is his work into which he has put, perhaps, something of himself. Modern works of what I shall later call conspicuous or pretentious art bear the maker's signature as naturally as a book's title page bears the author's name. The pot, then, the basket or the paddle, of an Apache or a Pacific Islander, calls for something more than its efficiency as a tool, if it is to be called an art-thing.

May I mention a few incidents that I seem not to forget? I think it was in the year 1900 that I saw the Passion Play at Oberammergau. That was ten years too late because it was no longer done as a simple peasant ritual out of doors, but under the protection

¹ This paper, continued in a section to follow in next issue, was read at the meeting of the Philosophy Club, New York, November 18, 1932.

² *The Pueblo Potter*, by Ruth Bunzel, p. 1.

of something like a railway station, and with its old peasant sincerity and loveliness compromised by attempts to make it more artistic and modern. The supreme moment of the play is the crucifixion and I can not forget how a young French priest sitting near me wept under the control of the profound emotion inspired by what was, after all, a work of art.

Another episode that I recall is the Easter Mass and its ceremony in Notre Dame, Paris. Everything was planned and patterned in conformity with the most sensitive esthetic culture and dignity. It was in this respect a work of art the like of which I have never seen again. It was, however, a ritual. The social function of the cathedral gave it the primary importance and value of a tool.

We sometimes hear, in the concert room, a musical composition called a Mass. But to hear that music as part of the setting it was composed for is a rare privilege. I happened to be in Venice just after the death of Pope Pius X. His actual funeral was in Rome. But there was in St. Mark's a Mass for the soul of the deceased. There was a small but very fine orchestra. It was all meant to have the kind of beauty that belongs to the dignity of such an occasion. The artistic beauty of it in the spaces and shadows of St. Mark's was very great and, hence, the dignity of all the ceremony was on a higher plane.

On another occasion, I happened to be in Freiburg when they performed the Mass in the cathedral for the ascension of the Virgin. I came too late to get inside, but I have always remembered the sound of the kettle drums under the vaulting, the points of light above the altar, and the picture of priests moving to and fro in their medieval vestments. Here again was a work of art—something of spiritual dignity—something that brought mankind there together into a sensitive and integrated group.

Brahms' Requiem was written in memory of Robert Schumann. It is a composition of the most earnest dignity and beauty and lofty sentiment.

I happened to be in London just before Christmas, 1919, and there I heard this same Requiem performed in memory of the English soldiers killed during the past four years in fighting against Germany. It was a scene and an experience of great dignity and worth. All these are instances of fine art in the most important human sense.

Art is so often thought of as something merely ornamental, as something irrelevant to other values. But there are occasions controlled by an earnest purpose and with an atmosphere that is spiritual and perhaps almost mystic, at least for some, and these occasions demand the kind of beauty that is appropriate and without

which they can not have the impressive quality they ought to have. Other occasions of a different sort call for the beauty that is appropriate to them; some are earnest and with a little of the quality of ritual; some are gay and seek to have the atmosphere of joy or merriment; what is beauty for one would be abomination for the other. A work of art that impresses me very much is one that most critics pronounce bad art. This is the statue in London on a public street, of Edith Cavell. It is not meant to be an ornament or a thing of beauty in the usual decorative sense. It is a monument, something more like a sacrifice to a loyalty, to a memory.

Art like this may be said to have a vocation. The instances just referred to as art that was unforgettable were bits of earnest ritual and we must not forget that so much of the art collected in museums was conceived and made for temples, sanctuaries, cathedrals.

Art, and by that term I mean fine art, the kind of thing produced by what we commonly call an artist, is a subject-matter of the greatest diversity. Its history is a detail in the history of civilization, it expresses the imagination, the spiritual level, a certain cultivation of the community that has it and uses it. It would seem that the question, "What is art?", ought to be important, or at least interesting. Somehow it seems to me of no importance at all except for the academic eloquence of a lecture platform. Nevertheless this is the question to the answer of which I shall try to make some small contribution. Whether the effort is worth while remains to be seen. I have no wish to dispute the theories of any one, and my ideas, such as they are, are not offered as footnotes to any system of philosophy.

I may seem to contradict what I have said with academic confidence for a long time. That is because the subject is so rich, so varied, so intricate, so blended with other things. Let me begin by explaining how I use the two words "esthetics" and "art."

II

As commonly understood today, the word "esthetics" means the analysis and study of beauty. In using the word, it is hardly possible to deviate very much from this usage, especially when one's way of handling it leads on to an opinion about fine art in general. I myself incline to go back to the ancient meaning of the word *aisthesis*, the meaning that Kant was faithful to when he called an early part of the *Critique of Pure Reason* the *Aesthetic*. What I mean by esthetics is, however, by no means so broad as *aisthesis*. It is that part of the total *aisthesis*, or what used to be called the *immediate*, that has the qualities of beauty, of ugliness, of both, or of neither in so far as this absence of both is felt as a definite quality.

It is that part of *aisthesis* that awakens the reaction of a certain type of valuation. Also, the world of *aisthesis* has at least one characteristic; it is always now. And this now is the empirical today.

Experience is always of today, which is, of course, a now of memories, regrets, purposes, and hopes, of reactions to many things that are behind the scenes or exist only as dreams and superstitions do. Scattered about in this world of passing *aisthesis* are the qualities of beauty and ugliness, or something like an actual quality of their absence, not floating mystically free, but qualities of things and facts, things and facts that may be useful or dangerous, and which are valued accordingly, but which are liked and disliked also for their beauty-ugliness complexion. A decaying carcass, a loathsome smell, a shrieking discord is as much a case of *aisthesis* as is the Fifth Symphony perfectly performed. The world is full of things to which we react with a yes-attitude or a no-attitude, or a complex of both. The rejection of the esthetically disagreeable, because it is disliked, is as positive an esthetic reaction as any other. Speaking roughly, the same thing may be both tool and ornament, an instrument and a work of art, a utility and an eyesore. And nothing is more obvious than this. Also it is a commonplace that things taste good and bad, smell and feel good and bad, sound good and bad, and look good and bad. And the word "good" means the same kind of *aisthesis* value in each case. When we say something is good or bad, we raise another question because of ambiguity of statement.

Experience is always of today, but that today is a complex of today, yesterday, and tomorrow. Yesterday was the cradle of today. We learn by experience. And today is the cradle of tomorrow. One often realizes that too late. That is because things so often have two kinds of value, now-value and tool or future-value. The tool is important now because it is a means to an end, and the end is a now-value sequence that may extend through many years, and is often conceived as belonging to the lifetime of someone else. So much for the word "esthetics." Now as to the word "art."

III

When one uses the word "artist," one thinks of Milton, Leonardo, Bach, Giotto, Bramante, Phidias. Men like these are teachers and examples to thousands of others. They bring something into the world that is of great value there in more ways than one.

In addition to these creative artists, there are those that execute the ideas or compositions of others in music, architecture, and more or less in other fields, people of the greatest technical finesse with-

out whose workmanship the creations of others could often never really live. And there is the host of nameless ones that have produced the Volkslieder of many languages, than which nothing is more human and spontaneous. And there is also the peasant that plays on his little wooden pipe for his own satisfaction and perhaps to please his children. Sometimes he can improvise little themes. There is the pioneer that builds his house in some remote place and who has no sense of proportion, and aims only at what he considers practical utility. Art may be anything from a teaspoon to the Parthenon or the Divine Comedy. What then do I mean by the word? Speaking roughly, as a crude generalization, human art is what is created by any human effort to produce beauty in the world, be it ever so transitory. This statement may have to be modified in many ways. And I am quite aware that I shall use the word "art" to mean different things, now the work of art produced, now the human effort to produce it, now, perhaps, the spirit in which that effort is made.

Viewing the term "art" in this comprehensive sense, one sees how concern about beauty, good looks, esthetic pretentiousness, is a constantly recurring factor of the human scene through all the history of it that we know. And the term "art" thus used is not merely vast, it is also restricted. As I have indicated, I use the word in its usual sense of fine art. A grain elevator, a sewer, a crowbar, is not a work of art unless it is meant to have not only the intended tool efficiency, but the so-called esthetic values also. These must, I say, be intended. The thing liked or admired for itself as well as for its tool-utility may have esthetic value by accident, or quite incidentally. All art is man-made, and though a screwdriver might be a work of art, the peculiar quality that would make it so must be not only man-made but man-designed. Not that this makes it worth any more in the human scene, once it is put there. But this is an aspect of life where one thing shades into another, or seems to, and where definitions must not be treated with mathematical piety.

IV

I am using the word "beauty" more than I like to. It is too suggestive of prettiness, and a little later I shall wish to extend it to mean something for which the label "beauty" might seem artificial. It is just these deviations into the unexpected that interest me; they suggest that perhaps the theme is not so bloated with futility as I thought it was.

It may cause a little surprise if I refer to the orthodox distinction between use and beauty as one of fundamental importance, and announce that what I have to say is based largely on that distinction.

An electric lamp is a tool, but it can be beautiful to look at, a satisfaction to the spirit, as it can be hideous. It has two kinds of value, not to be confused. When one thinks of use in contrast to beauty, one naturally thinks of the lamp as a tool that brings light where it is wanted, so that work or play may go on. The causal efficiency we think of is the intended efficiency of the tool. But the other values, the beauty or *aisthesis* values, may and often do have consequences of a different order. The beauty of the lamp, or of a poem, or of a person, may have what we may, for the moment, call spiritual values. Thus causality is not confined to the physical efficacy of the lamp, poem, or person in the usual meaning of the term; and what I have called "now value" in contrast with tool or future value is itself a blend of both now and future values. The analysis of all this shades quickly into a complex of verbal contradictions, a complex which here, at least, is generated by dialectic more than by description, and which lies, I think, outside the field of reference we are concerned with. For when I speak of the tool value of the lamp, I mean the tool efficiency intended, not other causalities unforeseen. And when I speak of now or *aisthesis* values, I mean only such values as are experienced now, and not consequences which follow unexpectedly, though naturally, upon the generation of these now-values. What alone keeps some pretense of order in the real world is the inevitable power and authority of the causality value, the fact that everybody concerned is a *zöön politikón*, and that we learn in spite of the allurements of today to pay insurance for the now that is to come.

The old term "beauty and use" is expressive of much sanity. It is a term we all understand, though the analysis of it is not so simple as I used to think. A garment may be warm and useful but sadly unbecoming, and a table lamp may be a thing of beauty, though far from being of the practical use intended. The two words are different. So, like many other innocent ones, I thought that the difference referred to in the properties of the lamp or garment was the last word about them. Just as the beauty of a Japanese sword is the beauty of a sword that is of Japanese craftsmanship and purpose, so one of Giotto's frescoes has for what seems its soul or essence the selected bit of Christian doctrinal imagination that it was Giotto's purpose to illustrate, giving his rendering such beauty as he could. This is nothing new, but today it seems to me that to detach the so-called esthetic values from other values of the thing they all belong to is to dilute and emaciate, by over-simplification, the esthetic appreciation itself. One of the most beautiful statues in the world is the marble Demeter of the British Museum. I used to say that so far as the beauty of the statue was concerned, it made

no difference whether it represented Demeter, Artemis, Madame de Pompadour, or Isolde. What I meant was that the marble figure, as such, has as a visual object its own intrinsic values and that experience in this field develops just this sense of discriminating one kind of value from another, the primary value of the visual object as such from the secondary enriching values contributed by the imagination or memory, and which alone and by themselves, though they might make a block of marble interesting, could never make it beautiful. The marble Demeter was found in what had been a sanctuary. The church of Demeter and Persephone was an institution in ancient Greece of the greatest social value, and its mythology is touched with the deep beauty of a human poetry. As a work of art, the statue is a man-made thing and as a man-made thing, not made to function as a physical thing in the world of physical mechanics, but in what I call a world of the imagination—as such a work of art, what I have called its soul or essence is contributed by the purpose of a human parent who regarded his offspring as an end and not merely as a means. The marble Demeter was, like many figures of the Virgin Mary, both end and means, but I think we may be sure that her perfection as an end is a subtle aid to her efficiency as a means. Meaning by primary values the beauty or ugliness of immediate *aisthesis*, these values, identical in every respect but not contributed by association or interpretation, can qualify the object whether it be man-made or nature-made, and thus what I call primary values can not distinguish a man-made from a nature-made thing, especially in view of the fact that these primary values may amount to zero, and that consequently the thing may be neither good nor bad, a mere thing of no primary value at all, whatever may have been the good intentions of its parent.

V

I am using another fragment of the obvious, namely, that a real mountain, a sunrise, a wild faun, are never works of art, because they are nature-made and not man-made, though pictures of them probably would be art. They would not be art, however, if made only for sale or exchange, or to cover a hole in the wall. Now, whether we speak of a statue, a tile of a certain color and finish, or a pair of shoes made by the skilled and conscientious hands of an old-fashioned cobbler, makes no difference. Any work of art has something that no nature-made thing can have, because in a figurative sense the art-thing is a child of a human maker, and as his or her child it has an intrinsic value of its own that is not identical with its use in the way of generating other values whatever these may be. And this something that no nature-made thing can have,

and no man-made thing that is exclusively a tool can have, seems to me just now to be the soul or essence of any work of art however transitory. And this soul or essence does not depend upon what I call the primary or purely sensory values. This, I confess, surprised me. Most art is very bad but, if it is art at all, it is born with its human essence. The parent did his best. And when I speak of art as bad art, I refer to the inferiority of its primary values which are its values for immediate perception, and not values contributed by association or imaginative interpretation. Here let me quote a passage by Gilbert Murray, to which I happen to owe a great deal. Professor Murray is explaining why no translation of fine Greek poetry is possible which shall give again the atmosphere and quality of the original. Accordingly he does not claim to give a translation of Euripides which shall be in quality at all like the Greek text. He writes:

The light of the original shines through it, and the music of the original echoes round it. Creech's versions of Horace and Theocritus may possess as little "art of speech" as their famous critic implies—I speak without prejudice, never having seen them. They may be to us unreadable; bad verse in themselves, and full of Creech's tiresome personality, the Horace no Horace of ours, and the Theocritus utterly unlike Theocritus. But to Creech himself, how different it all was! He did not know how bad his lines were. He did not feel any veil of intervening Creech. To him the Theocritus was not Creech, but pure Theocritus. When he read his baldest lines his voice, no doubt, trembled with emotion. But it was the original that caused the emotion. The original was always there, present to him in a kind of symbol, its beauty perhaps even increased by that idealization and endearment which naturally attend the long and loving service of one human mind to another.

What Professor Murray here says is that Creech was so thrilled by the secondary values of his own translation that he was blind to the unhappy quality of primary ones in this particular case.

There has been active discussion as to whether certain stones picked up in England were very crude and primitive stone tools, the earliest so far found from the paleolithic age, or whether they were mere stones, smoothed perhaps in some now vanished river. It might conceivably happen that something that had been regarded as a work of art should turn out to be a nature-made curio. In that case it would immediately cease to be a work of art. Nevertheless, all its primary values as an object of sense-perception, what its beauty depended upon, would remain. Secondary values and parcentage would vanish and with them would depart the soul or essence of the art-thing. Any art-thing must be designed or made with the intention that it have this undefinable aspect called beauty, or something very akin to it, and at the same time its essence or spirit is not in the fact that to some extent beauty is there, but in the fact

that putting and having it there was the concern or part of the concern of its maker.

Art, thus conceived, might be illustrated by the Zeus of Phidias at Olympia, or a birthday cake, by the Bach Air in D, or by an artistically designed henhouse, by a dinner plate or a peasant's two-wheeled cart, by a railway station, a dog kennel, or a typewriter.

VI

I saw, last spring, an exhibition of experimental efforts to arrange the room occupied by a child so as to awaken the youngster's spontaneous though perhaps unconscious liking, its esthetic responsiveness. Success in this direction, it was felt, would help to harmonize the beginner's world, and reduce, if not remove, various frictions and irritations. Here was at least a recognition of the normal functioning of the sense of beauty in its embryonic stage. The little rooms were primarily tools, perhaps not art things at all.

We can not tell positively whether animals have the sense of beauty or not, but for me it is hard to believe that some of the higher ones do not have it, at least at the mating season; and that is when the human creature is most awake to it. This sensitivity is so akin to biological response of like and dislike, of desiring, of seeking and avoiding.

VII

One most interesting point in this general field has, I think, been hardly touched upon, and that is the esthetic feeling of primitive peoples toward their own art. The styles, technique, practical purposes, social functioning of what we call art objects, have been well approached. Perhaps what I call their esthetic feeling is not different from our own. Professor Boas has written a fine work on primitive art, but it is nearly all about craftsmanship, design, and sources of decoration. He does say, however:³ "Among primitive people the *καλόν* and *καλόν* coincide. Goodness and beauty are the same. Do they, then, possess the same keenness of esthetic appreciation that is found in at least part of our population? I believe we may safely say that, in the narrow field of art that is characteristic of each people, the enjoyment of beauty is quite the same as among ourselves—intense among a few, slight among the mass." Also the "art style of the Northwest Coast Indians can be fully understood only as an integral part of the structure of Northwest Coast culture."

Professor Boas refers to what is to me a point of major interest and is, I think, a point of great importance, how art functions in

³ Franz Boas: *Primitive Art*, p. 356.

the culture it belongs to. What Professor Boas and others suggest is that the art of a culture, Chinese, Spanish, Middletown, helps greatly to make it a culture to possess and belong to. That art is a great force in a social world in generating a spiritual culture such as found its voice in Dante, Pericles, Molière, Duccio, Plato, Phidias, in the architects of the Cathedral of Chartres and the makers of its glass. Here we raise the question: What does art do in the world that brought it forth? A question that I, at least, can answer hardly at all, except to say that without art that world would be without imagination because it would lack the machinery for expressing it and generating it. It would be a world of practical industry, competition, and literal-minded reform. And that statement, too, is a bit temperamental.

Here I must diverge for a moment upon a theme that deserves a considerable book—Why is the word “art” so commonly thought to mean something exceptional, rare, precious, expensive, and illustrated more genuinely by something from the time of Phidias or Botticelli than by anything of to-day? Every bit of art was once of to-day, whenever that was.

No doubt many things contribute to the answer of the question I refer to. I will mention one. The nineteenth century was, in western Europe, a period of industry and science. Religion faded out and with it faded a vast world of mythology and habitual imagination. Art calls for a certain spontaneity, a certain freedom of metaphor, a naïve identification of facts and values. Before the nineteenth century, art was an element in a world where aristocracy was important and conspicuous, and art provided a machinery for praising it. It may be that art is not easily at home in a democracy where the machine counts for so much and work by hand for so little, where the dreamer is less free to be an inspired fool, and where the eccentric genius seems a heretic in the Mid-Victorian dream of nature-made equality and mediocrity; a world where common sense everywhere is one, perhaps where nothing is uncommon and where nothing ought to be. As a distinguished sociologist said a few years since, “Americans talk much of liberty but what they want is uniformity.” And we are assured that the world is being Americanized. Art has become something exotic, not something that is a matter of course; many feel estranged because it seems a cult of the Virgin Mary, Saints, Christian ecstasies, Apollo, Aphrodite, or Jupiter. They voice the provincialism of progress. And, of course, in these remarks I have used the word “art” in the small bookish sense that I dislike. In that sense, the traditional one, the possession of art is a gesture of social self-importance. The coming of democracy in the nineteenth century may have been a salvation of the western

world, but in a sense it may have been like the engulfing of the Hellenistic world by the Middle Ages. The twelfth and thirteenth centuries evolved an art of great beauty, dignity, and social meaning. But in a society where art is rare, precious, and unusual, people can not be expected to regard it as an altogether normal circumstance. It may easily be art of the dull, the self-important, and the clever. It may be that a world of practical industry is much to be preferred, but that, I candidly fear, is not a world where art will be unconsciously at home. Whatever brought it about, something happened parallel with the industrial, the social, the intellectual revolutions in western Europe that left its civilization indifferent to art, to the skilled beautifying of its world. In China it happened a little later, with the invasion of habits and tastes not native to the East, and which the East could not translate into the art it understood. In the West, quantity machine production, the death of handicrafts, the passing of aristocracy with its emphasis on esthetic style, the growth of democratic Middletown, the introduction of efficiency in charge instead of established local customs, styles, and rather pious and unquestioning tradition, the breaking down of social and spiritual frontiers, something very like what has happened in China—these and no doubt many other things overturned the soil that was, after all, art's garden just as the invasion of missionaries and traders into Africa has been followed by the gradual dying of its native art. I do not for a moment say we want that old garden back for the sake of the art that blossomed in it, but a machine-made world is very different (God be thanked, perhaps!) from one of skilled and conscientious handicraft. For, whatever happens, we pay a certain price, and sometimes the price is greater than democracy realizes. We see pictures of the Sphinx, of the sculptures from the earlier Parthenon, of the art of Delphi, of Greek vase paintings, of Annunciations, of pilgrimages from earth to heaven, of a crucified Savior, of Buddha, of Voltaire, of ladies of the court of *L'état c'est moi*. These are for us but fantastic ornaments; of course art belongs to a childish and a *passé* world. The question "What were such things for?" is one that writers about art, and professors of its history and styles, seem never to ask. Nevertheless, an interest in beauty is being born again; of that I think we may be fairly sure.

When, as to-day, art itself is so characterized by a struggle to escape, where our esthetic appreciation is so harnessed in the language of a tradition, it is interesting to seek a better acquaintance with so-called primitive art, and so I return to Miss Bunzel's book on *The Pueblo Potter*.

The writer explains that her book is an attempt "to enter fully into the mind of primitive artists; to see their technique and style,

not as they appear objectively to students of museum collections, but as these appear to the artists themselves. . . ."

The art of every tribe has its own style, and the word "style" here means, I think, not what is characteristic of the individual but of the group. Each individual artist uses naturally the style of his group as inevitably as he uses its language. It would seem that every craftsman must be a stereotype. "In Zuni this is the case." Nevertheless the artist is regarded as a productive individual and independent originality is what is esteemed and expected. The gifted artist in any culture is, within limits, a non-conformist; his coming is always an event, and in two cases, described by Miss Bunzel, such individuals have recently appeared. "Nampeyo, a potter of Hano, revived and adapted the ancient ware of Sikyatki. She did not copy Sikyatki patterns, her imagination recreated the Sikyatki sense of form. An even more striking personality is Julian Martinez of San Idelfonso." . . . He and his wife, working together, invented a new technique and a new style of ornament. . . . "Material in the form of decorative motives, he took wherever he found it. His discriminating and imaginative use of what came his way has produced a style of rare distinction. In both cases the new style has, within a few years, completely displaced old types of ware and ornament. . . .

"The writer has studied other artistic productions of the Zuni and other Pueblo tribes, especially their tales, songs, chants, dances and rituals." . . . For Miss Bunzel's study of these, see the *47th Annual Report of the Bureau of American Ethnology*. All of these activities are the . . . "response to a double motivation—the achievement of some obvious external end, tool efficiency,—frequently the control of supernatural forces—and the gratification of the esthetic sense.

"Songs, prayers, rituals, all have their purely formal characters, often greatly elaborated. . . ."

Much of the decorative design and pattern of Pueblo pottery has its imaginative meaning. Here are a few of those that Miss Bunzel has collected. The meanings attached were nearly all obtained from the makers themselves in 1924, and most of them were verified in 1925.

Two pots are decorated with the figure of a deer. The makers of them explained this by saying: "We paint the deer so that our husbands have good luck in hunting. Deerskins are so expensive we can not buy them any more, and so we like to have pictures of the deer in our houses like the white people have pictures of God."

Another pot has a design representing a little cloud. The explanation is: "The little cloud left all alone in the sky after a storm.

She is left alone when the other rain-makers come to make rain because during her life she never went to dances. She is lonely and the Milky Way comes to visit her."

One pot is decorated with water birds. "We like to paint the water birds because they live in the water and so the jar will never be empty."

Another pot has a picture of a dragon-fly. "He has been caught in the rain and the wings stand out straight and bedraggled. A prayer for rain."

Another pot has a design meant to represent a lonely cloud. "This is the little cloud all alone in the sky after it has cleared. The people who do not go to dances are like that when they die and go to the village of the Masked Gods. When the Masked Gods come back to Itiwana, she will not be able to come with them, but will have to stay all alone like a cloud after the sky has cleared. And she will always be looking and looking for some one to come. That is why they paint eyes looking out in all directions."

There is a great deal more, including much from Miss Bunzel, that I would like to say about the art of the American Indians. Of exceptional interest are the sand paintings of the Navajos, and it is a great pity to pass them by here for lack of space. Also their silver work and woven blankets and rugs are distinguished examples of fine art.

In 1930 there was an exposition in Brussels of primitive Negro African art and an illustrated supplement of the catalogue by J. Maes and H. Lavachery was published. The reviewer of it in the *American Journal of Archaeology* (Vol. XXXVI, No. 1, January-March, 1932, p. 87) writes as follows:

"It would be ridiculous to overlook the powerful effect of primitive especially Negro art on western Europe in recent times, but, as Mr. Maes points out, this inspirational value for us does not take into account the whole beauty of Congo sculpture," and quoting Mr. Maes the reviewer continues: "To appreciate the profound beauty of Negro art in general and especially the sculpture of the Congo one must see the subject as part of the native life, sense its personal significance, piercing through the screen which conceals the significance of the object which the artist has produced. To separate the object from its social meaning, to forget its ethnic rôle in order to see ideally and seek there only its aesthetic aspect is to deprive it of its meaning and its purpose."

The European artist aims at copying in more or less detail something that he can observe, but the mid-African does nothing of the sort. Some details of his subject seem of dominant importance and he emphasizes these in a way that turns his work of art into what

seems to us a monstrosity, until we become accustomed to his procedure. The resulting figure never aims at reproducing an actual model but is designed by the full force of his native feeling and imagining, and to miss this is to miss what is most characteristic and genuine.

VIII

There are very interesting passages in a work entitled *Buddhist Art in Its Relation to Buddhist Ideals*, four lectures given at the Boston Museum of Fine Arts by a Japanese scholar, Mr. Anesaki. This volume is dedicated to Francis of Assisi because the writer feels so much connection between this Italian saint and the Buddha whom he reveres. Here are a few lines from his Preface (page viii):

I was born in Kyoto, the centre of Japanese Buddhism and Buddhist art, and was, in my early years, quite intimate with the relics of art stored in the temples in and about the city. But my sense for art was overshadowed by my study of philosophy, especially of English agnosticism. Later, when I studied German idealism, during my student years in Tokyo and Germany, a revival of Buddhist idealism became a powerful factor of my mental life, and enabled me to appreciate more deeply than ever before the ideals of the Buddhist and the Christian religions. My journeys in Italy, in 1902 and 1908, especially the latter, had the effect of awakening my remembrance of Buddhist Art, and thus a high admiration for Buddhist painting has become inseparably connected with a similar feeling for that of the Italian Quattrocentists, just as my devotion to Honen, the pietist saint of Japanese Buddhism, has been linked with my reverent attachment to the Christian saint who preached to birds and wrote the Canticle of the Sun.

What I call attention to, however, is that much of art, whether it represents the Virgin Mary or Buddha or Apollo or some primitive deity, stimulates and functions for the different worlds of imagination in a way that we have every right to call spiritual, however superstitious it may otherwise be: and also that this world of imagination is, throughout certain chapters in the history of culture, a socially integrating force. It is a factor in social psychology which is, I think, of the greatest moment. The author begins his text as follows:

It is almost needless to say that art and religion are two of the most potent factors of human life. Art stimulates fancy by visualizing and perpetuating beauty; it also tranquilizes the mind of man by inducing it to contemplate what underlies the loveliness of forms and colors. Religion gives man new life; it is an inspiration to the vigorous and a consolation to the weak; it incites man to activity, even to the risk of death, but it also pacifies him and transforms the wolf into a lamb. These two factors have almost always been associated throughout the history of mankind. Religious faith has invariably found expression in art, which, in turn, has derived the inspiration of its highest achievement from religion.

Some of this sounds, I think, a little naïve, but it is, perhaps, thereby a better example of what I wish to point out. The writer misses, however, just the point I try to emphasize. Religious faith has no doubt invariably found expression in art, and art in turn has very often derived the inspiration of its highest achievement from religion. My point, however, is that without what we call art which provides not only so much of the machinery of religious ritual but presents the imaginative and, if you like, superstitious doctrines to the very senses of the worshipper, religion would not have much of a career.

One of the plates in the volume from which these quotations are taken is a picture of Kwanon as the Merciful All Mother by an artist who died as late as 1888. Mr. Anesaki speaks, as follows, of the artist and his theme (page 18):

His conception was the inexhaustible love of Kwanon, the Mother of All, who is sending her offspring from the realm of light and purity down to the world of sorrows and tribulations. She stands in the midst of golden illumination and resplendent clouds. Her left hand carries a tiny branch of willow, a symbol of weakness, and from the flask held in her right hand falls a drop of water, the water of wisdom, which forms a transparent globe containing a baby. The child looks back in gratitude or in farewell towards the mother above, his lovely hands joined in adoration. The place where the baby is destined to be born is the world of dark clouds among which rugged peaks are seen. The love of the mother, a virgin mother of heavenly dignity, is a pure maternal love, but it exhibits a depth of tragic compassion. She knows the toils her baby is going to encounter in the world below, but she is resolute in sending him there and sure that he will confront heroically the troubles of human life, and carry among mankind the love and wisdom of his mother by emulating the spirit of Buddha's saints.

May I repeat?—the writer assumes that the painter of this exquisite picture is giving expression to what belongs to the collective imagination of his people. But he does not point out that without a host of other artists who lived and worked long before him the artist who died in 1888 would have had little to express. Again I wish that Mr. Anesaki had expressed himself a little less tenderly. If he could have written his book in Japanese perhaps he might have done so.

One other point of great consequence may be mentioned here. A world rich in art is a world where emotion is not starved, where there is atmosphere of ideals, where one is not surrounded by physical mediocrity, gestures of what is spiritually commonplace. In philosophical discussion, the word "emotion" is hardly respectable, and I agree that in emotion there should be a temperance that makes it something to be diffused and distributed through much of life. I am not advocating storm and stress. And I think that where the

human scene cares for the values of the now that we are always living, disciplined emotion is more at home. And of course this must be cultivated with wisdom, discipline, and discretion.

I seem to be speaking of art as a power, a social influence, as something to be used. And I do not think this contradicts anything I said before, which was that the beauty of an electric lamp must be distinguished from the use and importance of the lamp in lighting the room. And I mean by tool what is intentionally so used.⁴

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ON THE NATURE OF MEANING

WHENEVER we try to analyze belief or meaning or any other of the constitutive processes of thought, the object of our enquiry becomes confused with the act of thinking about it, so that although the process itself is intuitively apprehended, it eludes theoretical description; and yet, for this very same reason, whenever we have succeeded in describing one of these familiar aspects of thought, our description must be simple and irresistible, so that the common run of intelligent persons will feel at once, on hearing it, that this is just what they would have said themselves. Convinced that neglect of this requirement has prevented us from getting a clear view of the nature of meaning (although the subject has been pursued with special zeal in recent years) it is with the needs of the common man in mind that I approach the subject here. The concept is in itself simple, but it occurs in a great variety of settings, so that if the discussion once turns that way it is likely to plunge deeper and deeper into a quagmire of useless distinctions. I have tried to avoid that danger by exploring merely what might be called the "gross structure" of the concept.

I

Meaning is the relation between two associated ideas, one of which is appreciably more interesting than the other. The less interesting of the two ideas is always the symbol; the more interesting is the thing symbolized (which I shall refer to as the goal). This inequality of interest creates a feeling of tension or tendency which distinguishes meaning from mere context. Thus the sound of carpet-slippers shuffling over the kitchen floor means for me that the charwoman has come, because the sound itself is of little importance, while her arrival does have some practical interest. I have been

⁴ To be continued in next issue, No. 9.

watching the clouds on the horizon from time to time and notice with surprise that one of them does not appear to be moving; suddenly it ceases to be a cloud at all and I realize that I see Mount Baker. The white conical patch is unchanged so far as the image thrown on my retina is concerned, yet it has become for me a very different thing. In this case not only does the percept mean first cloud, then mountain, but the fact that the white patch does not move with the other white patches means first "not a cloud," then "Mount Baker."

Speech-sounds make admirable symbols precisely because they are intrinsically so uninteresting and their relation to the things they mean is so arbitrary. They have a kind of stolid unity which permits them to stay before the mind, and it is thanks to this stability that we can combine them into sentences and thus build up complicated thought-structures. This is why persons unskilled in psychological analysis suppose the meaning of words to be very definite and tangible. They picture a series of symbols going forth, each bearing its own bit of meaning, like a stream of electrons each with its charge of electricity, or like the cash boxes in an old-fashioned dry-goods store. The hearer strips the words of their burdens, puts the bits of meaning together, and has before him the meaning of a sentence. Of course, words can not and do *convey* anything; they are merely intricate stimuli, which may or may not arouse in the hearer the thoughts which we wish him to entertain. Nothing but sounds and melodies actually pass from one person to the senses of another: meaning remains the private possession of each. If I wish to communicate with some one I can do so only by uttering sounds which are associated with my thought, trusting that in the mind of my interlocutor they will have similar associations and will make his thoughts resemble my own. We can not explain color to a man born blind, or remorse to a moral imbecile; language must appeal to experiences which the hearer has had and can recall. We can, it is true, by suggesting a combination of familiar elements and by the use of metaphors, create novelties in the mind of another: we can tell him what a dragon looks like, or describe the feelings of Hannibal as he first caught sight of Italy from the Alps, but only in so far as he already possesses the sensational or affective *Gestalten* appropriate to the case.

A glance at the dictionary will verify the reader's suspicion that the definition of "meaning" I have given here is much narrower than the range of its familiar uses. If the word is to be used as a philosophical term, however, we ought to decide upon some precise acceptation and stick to it. The use of the word to designate the thing symbolized (as well as the relation of symbolism) is so in-

veterate and so convenient that it can no longer be avoided even in technical language; nor does it actually give rise to any serious confusions. But we should distinguish very carefully between symbols and signals, and refrain from using "meaning" when we are really talking of implication or reference.

The difference between symbol and signal is rather hard to grasp because the two things commonly occur together; the important point is that the signal arouses activities in which it afterwards plays no part, while in true language words are at once a stimulus and the medium of thought. The signal leads to an action; the true symbol makes us think about something. The signal may merely set in motion a conditioned reflex: when we hear or see a symbol we ask ourselves: "What does it mean?" A military command, such as "Squads to the rightabout!" *means* something to the recruit; to the veteran it is a mere signal.

The term "implication" should be strictly reserved for describing the objective relational nexus in which every object is enmeshed, and the realization of which constitutes judgment or inference. You have seen many foot-prints in the sand as you walked along some bathing-beach, and every one of them implied the presence of a human being; but they *meant* nothing to you because you were not interested in them. Yet when Crusoe saw a foot-print on the shore of his island it *meant* a great deal to him, because he realized the implication. Of course, not all meanings correspond to implications, since there are many associations of ideas which have no logical ground. The point of my illustration is the contrast between meaning as a mental event with implication as an objective fact. *Reference* I take to be a special case of implication, wherein two objects are related *via* a mind. It differs from meaning in this respect: the goal of meaning is an idea; the goal of reference is an *object*. To this subject I will presently return.

II

Having defined meaning as the relation between ideas unequal in interest, I must do what I can to clarify these two terms. Both, unfortunately, involve obscure metaphysical problems: it is therefore wisest to *exhibit* rather than to define them.

Interest may be called the subjective aspect of importance—the value of a thing in so far as it affects a human being. It is more accurate, perhaps, to say "value-relations," since we are interested in escaping from evils as well as in securing goods: the farmer, for example, is interested in getting his wheat in before a storm. *Why* some things are important and others not, is a very difficult question. The theory of evolution offers a kind of generalized solution; yet

the application to particular cases is usually very disappointing. Why does the heart of a paleontologist pound furiously when he discovers a new species of trilobite? and why does Saint Blandina prefer being gobbled up by lions to putting a few pinches of incense on the altars of the state? The biological explanations of such phenomena have the air of being headed the right way, yet they certainly fall short of the goal; and anyone who is content with loose talk about the *libido* or the head-instinct is assuredly no philosopher.

It is important to distinguish very carefully between interest and attention. When a dog is hunting a rabbit, the rabbit is certainly the center of interest for him; and yet his attention is fixed upon the scent, which is merely the symbol of the rabbit. So, in our reasonings, we attend very strictly to the trail of symbols, pausing at intervals to envisage our goal, then quickly turning our attention back to the symbols. Attention or awareness thus appears to be *durchaus* instrumental. We are aware of the *means by which* most of the time, and only occasionally catch a glimpse of the goal. We are aware that our words have meaning; we are aware that our actions are purposive; but we are not often aware of the meanings and purposes themselves.

The use of the word "idea" in our definition involves us in even greater difficulties than beset the word "interest." "Why do you say that meaning is a relation between *ideas*?" you may ask; "When I use a word to refer to a ship, it is the real ship I mean, not my idea of a ship. Even when I speak about 'my idea of a ship,' as I did just now, I objectify the concept and deal with it as a mere phenomenon."

There is, first of all, a confusion here between meaning and reference. If a real ship is in view and you refer to it, using the word "ship," you at once *mean* the idea "ship" and call my attention to the presence of an object. *It is the idea, not the symbol, that refers to the real.* If you tell me that your grandfather came round the Horn in a sailing-ship, your words mean (i.e., lead me to) an idea, and this idea or mental process of mine bears a definite relation to a real grandfather and a real ship. Without pretending to solve any metaphysical problems, I should like to describe what seems to me the best way of dealing with this particular relation, namely, of idea to real object.

Plato says of the geometers (*Republic*, 510 d): "And do you not know also that although they use and reason about visible forms, they are thinking not of these, but of the ideals which they resemble; not of the figures which they draw, but of the absolute square and the absolute diameter, and so on: and, while using as

images these very forms which they draw or make, and which in turn have their shadows and reflections in the water, they are really seeking for the things themselves, which can only be seen with the eye of the mind." In other words, triangles and diameters are real things, but since they are relational they have no locus in space and time and are neither one nor many. Our senses present to us *cases* of triangles, and by means of these representations we know the relations of which they are cases. We may erase our pictures: our memory of what they looked like will still serve as a means of knowing the relations; that is, either a sense presentation or a memory image will serve.

Let this now be applied to the world of objects and events. My idea of a ship is not a particular image. The image is merely a convenience, comparable to the drawings of the geometer, by means of which I may know the universal. And this universal is not a representation: it is a *Gestalt*—a relational constellation of which every real ship is a case. So the fact that the ship on which your grandfather came round the Horn is far removed in time and space does not prevent my knowing relevant aspects of the ship which are just as real as the sense data I might have if I trod her very decks. If I am unduly imaginative and picture to myself many details which, as a matter of fact, were not present, all this embroidery is knowledge of real things: it is simply out of place.

Viewed in this light, the question whether words mean ideas or refer to real objects loses most of its meaning, because the clear contrast between real and ideal is lost. We have got into the habit of regarding ideas as things that are *in* the mind because we can not free ourselves of the notion that everything must be somewhere. This I believe is merely a vulgar prejudice. There are aspects of reality which simply have no locus; to experience them we do not need to be in immediate contact with them as in the case of things perceived; we need only an implication or meaning which will lead us to them. That is why we are able to follow an elaborate suite of symbols, knowing the *fact* that they have meaning, yet, so far as introspection can reveal, quite unaware of these meanings. It is impertinent to ask where the things symbolized are hidden all this time: they simply are not anywhere—do not *have* to be anywhere.

III

Assuming that our thought is at least fairly represented by our awareness, and noting that the word-symbols occur in a linear order, logicians have always assumed further that thought itself, like discourse, is discursive, and that the arrangement of words pictures the course of meanings. Exceptional sentences, it is supposed, may be

reduced to typical forms, and these typical forms may be abstractly presented in what is called symbolic logic. There *is*, of course, a discursive aspect to thought, but it consists precisely in the process of collecting data *before* we perform the psychic act called judgment. Our thinking consists of a series of such discursive presentations alternating with moments of synoptic apprehension, during which the relational complex is viewed as a whole. The elements are, as it were, held in suspense until the end of the sentence is reached; only then are we really aware of what the words mean. In the same way we take in melodies, not note by note, but phrase by phrase. In the same way, events, as we experience them, appear in a duration, but when we recall them appear as episodes, to which we refer as "the time when."

What language, or any other kind of symbolism, does for us is to orient our minds and guide them into the appropriate sphere of experience; but it is a sphere of experience, not a sphere of discourse. We understand by intuiting the sphere of experience thus brought before us, not by manipulating the symbols. In ordinary speech, what is made explicit is notoriously much less than the meaning, for language works largely by evocation. A very striking illustration of "latent meanings" is offered by the familiar combination of verb and object: the grammatical relation corresponds, not to one, but to a very large number of real relations. We merely plumb down verb and object side by side with no preposition between them, letting our hearer see for himself what would be appropriate. Such phrases as: "He dusted the top of the book with care," and "She dusted the top of the cake with sugar," are deplorably loose structures, yet they are perfectly understood. The most useful means of evoking experience which, for some reason we find it hard to express, is metaphor. In metaphor, the linguistic symbol leads to a mental image which in turn means an idea; in other words, a metaphor is an expression whose meaning is a significant image. Often the bond between image and idea is a very slight one—mere identity of relational pattern or of psychological attitude. When one considers how much of language is made up of "lapsed" or "congealed" metaphors, one feels great sympathy for the unhappy logicians and grammarians who are still struggling with the "cash-box" theory of meaning.

The use of mathematical symbols, far from clarifying our thought, simply accentuates the defects of language. In so far as the logical symbols are like mathematical symbols, and mean pure relations, such as inclusion and exclusion, they give rise to a system of theorems comparable to a geometry; but when applied to the real world they are not only inadequate but have not even the evocative power of

ordinary speech. It is sometimes said in defense of them that their very abstractness fixes our attention exclusively on the formal aspects of inference. This would be a very happy device, of course, if the forms which they represent were actually the forms of thought; but they are not. Logical forms are derived from grammatical forms (without any critical account of the relation) and these in turn are merely metaphors by means of which we hope to adumbrate what we have intuited; and finally, the symbolic systems of mathematical logic present an abstract version of logical form. Thus the hope that the introduction of mathematical symbolism is to bring about a kind of renaissance in logic seems to me illusory, and will be dispelled as soon as we have framed careful definitions of such words as "meaning," "subject," "predicate," "adjective," which at present are employed as though there could be no question about them. No matter how intricate and imposing the structures may be which are got by recasting in symbolic form the unrecognized metaphors of grammar, the work can serve only one purpose: to illustrate the principles of a now moribund classical logic. What we really need is a kind of dialectic by means of which to penetrate the unavoidable obscurities of expression and come face to face with the real.

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BOOK REVIEWS

An Introduction to Living Philosophy. D. S. ROBINSON. New York: Thomas Y. Crowell Company. 1932. xiv + 381 pp.

This book, like the other works of Mr. Robinson, will be widely accepted as a valuable and needed contribution to the text material for that bug-bear of philosophy departments, the introductory course. In general, it parallels the *Anthology of Recent Philosophy*, and the parallel makes both books much more usable, although either may be used independently.

Like the *Anthology*, this introduction is divided into five parts. Part I is introductory. Parts II, III, and IV, following the traditional classification, discuss idealism, realism, and pragmatism, respectively. Part V extends this classification by including a host of movements not previously mentioned, as predominantly idealistic, predominantly realistic, and predominantly pragmatic.

Part I, the orientation, is introductory and sets the tone of the whole book. It begins with "Everyman's Philosophy," for Mr. Robinson conceives the basic pedagogical problem confronting the teacher of philosophy to be the release of the student "from the

bonds of common sense, that he may make the steep ascent to those sublime speculative heights where he may breathe the rarified atmosphere of divine philosophy." I confess this passage reminded me of the first footnote in the Appendix to Kant's *Prolegomena*. But why this daring refusal of common sense for speculative heights and the attendant rarified atmosphere? The answers are various: for the joy of it, for theological reasons, for sociological interests, and just for the sake of "knowing." This "knowing" is, I take it, explained to the interested student in Parts II, III, IV, and V of the book, but the student is forewarned in Part I that the mastery of this "knowing" "requires that the student shall break the backbone of the subject in a wrestling bout with its technicalities." It is a fair warning.

With some advice on how to study philosophy and on the method of philosophizing, or rather a method of philosophizing that owes much to idealism, the author passes on to the traditional three pigeon-holes of philosophy in Parts II, III, and IV, i.e., idealism, realism, and pragmatism. With regard to each, he discusses what it is, its method, its "solutions of the problem of knowledge and existence," of truth and error, of the body-mind problem, and the problem of value and evil. In addition, there is at the end of each part a chapter setting forth very well the typical objections raised by the two other types of philosophy.

The character of the book, with its many subdivisions and immensity of detail, hardly lends itself to any but a tedious analysis. It will not be difficult for the reader to find subjects for quarrels, though to no greater extent perhaps than in any other book of this nature and to a much less extent than in most. The definition of idealism, as those theories of ultimate reality of the universe, which make that reality consist of ideas, in the Platonic sense of Idea, or the Neo-Platonic sense, or the Lockian sense, or the Humian sense, appears to this reviewer to be confusing, since much of recent idealism could hardly be forced into any of those four categories (pp. 68-69). Or again, an elementary text may not be the place to introduce such a term, "the method of intensive concretion," which Mr. Robinson originates in contrast to Whitehead's method of extensive abstraction. This new term, I think, may prove interesting and valuable to the initiate. But its usefulness to the beginning student may be questioned. It does, however, serve as a counterpoise to the very well-written chapter in Part III on "The Methods of Realism," a chapter which makes excellent use of Whitehead's Method of Extensive Abstraction. In Part III one misses from the treatment of realism any discussion of the problem of subsistence and its significance for realism, though it is mentioned.

Part IV on Pragmatism by no means reserves all criticism to the chapter on Typical Objections. Then, too, one finds in that Part such amusing expressions as that in the pragmatist theory of truth, "Beliefs in these fields (aesthetic, religious and moral) have meaning but not truth. All philosophical beliefs are excluded." Furthermore, this part would have been of much greater value had the work of Mead been used in the discussion of "Pragmatist Solutions of the Body-Mind Problem." But—enough of that. The discussions on the various types of philosophies exhibit an obvious and successful attempt upon the part of the author to take to heart his exhortation to students to be unprejudiced. In this respect the book is fairly unique and it will no doubt be to many a welcome contrast to the so-called introductions to philosophy which are each no more than an introduction to a particular philosophy.

Part V departs most from the parallel with the *Anthology of Recent Philosophy*, although by no means entirely so. The "joyful" wisdom of Nietzsche and the philosophy of alleged history by Spengler are dismissed with shorter space. This part extends the traditional classification, as has been said above, by attempting to include in hasty fashion a number of philosophies, not previously mentioned, as types predominantly idealistic, realistic, and pragmatic. With the exception of the work of Husserl, recent movements in Germany and Austria are omitted. Perhaps the whole of Part V might better have been given over to these.

It is difficult to avoid closing this review with a note of pessimism. For I can not escape the feeling that the student may very easily finish this text in a confusion of theories and counter-theories, rebuttals and surrebuttals, and with a brief finale "well, what of it." This is accentuated by the very fairness of presentation and by the wealth of detail. Is there no choice but this confusion or a superficial eclecticism or the sedative of dogmatism? If one agrees with Mr. Robinson that "Professor John Dewey has rightly stressed the significance of the general social life and culture of a people in the development of their philosophy" there would seem to be a way out. But this text does not show that significance. There is a fundamental fallacy that runs through the whole book. The so-called problems into which Parts II, III, and IV are divided are not real problems. Consequently there are no solutions to them and thus they are given the appearance of eternal problems. They are the dialectical difficulties of idealism. Dialectical enigmas lead only to the bickering evidenced by this book; real problems present goals of coöperative human progress. So long as there are real problems there will indeed be differences of opinion, but those differences will not be the hopeless differences that arise out of philosophical riddles.

Mr. Robinson can find literature on these subjects because realism and pragmatism in their revolt against idealism have dealt with those difficulties; far too much so. But realism and pragmatism are more than merely anti-idealistic; their positions are not simply to be stated in relation to idealism. The realist, as well as the pragmatist, has insisted that real problems can be solved and has made notable contributions. Mr. Robinson has not failed to note this attitude (p. 163 ff.). But its significance is dissipated with the conclusion that "Realists have not yet succeeded in rewriting the philosophy of science, metaphysics, ethics and aesthetics with the symbols of mathematical logic" (p. 167). With regard to pragmatism the architectonic of the book forces a chapter heading, "Pragmatism solutions of the problem of . . . existence." Pragmatists have, of course, denied that there was, or could be, any such problem. Thus there is scarcely any solution offered. On the other hand the contributions of pragmatism, e.g., along lines connected with scientific method, social psychology, education, and socio-political theories are scarcely mentioned, or not at all. But the realist and the pragmatist are not the only sufferers. Mr. Robinson has by no means made out a case for idealism, even if "Idealism is a giant like Samson." Samson, I understand, did a good deed by dying; and I can not agree that when idealism dies philosophy itself will be no more, nor would I agree if this were said of any other philosophy. But when any philosophy ceases to be anything more than a "wrestling bout with its technicalities" it will be dead already and a new philosophy will arise.

In an age engaged in reviewing the foundations of its science, the place of that science in its human life, the readjustment of its social structure required by technological advance, the nature, possibilities, and necessities of a good life in its world; in such an age there is room for living philosophy. There is need for an introduction to living philosophy. But the purpose of that introduction is not the production of technicians in philosophy; the purpose of that introduction is the production of a civilized and educated philosophy of life.

THEODORE T. LAFFERTY.

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Der Möglichkeitsgedanke Systemgeschichtliche Untersuchungen.
Erster Teil: Antike Philosophie. Zweiter Teil: Christliche Philosophie. AUGUST FAUST. Heidelberg: Carl Winters Universitätsbuchhandlung. 1932. xii + 460 pp.; v + 356 pp.

Possibility is one of the basic concepts of metaphysics. Its fundamental character is revealed in the fact that just as soon as an at-

tempt is made to define its relationship to a cluster of cognate and polar categories, such as the actual, the necessary, the contingent, the consistent, the probable—nothing short of a system will do. Every situation characterized by change or action offers a specific illustration of its nature and a challenge to analysis. The author of this very erudite and rather prolix study started out from a concrete problem, but instead of discussing the range and nature of possibility in relation to this specific problem, he has written a history of philosophy (a third volume is promised) from the point of view of the general problem of possibility.

The author tells us that as a result of his experiences during the war and post-war period, he became absorbed in the questions of the nature of the community and of the educational process. Although anxious to take up specific problems of social philosophy and pedagogy, he feels that the logically prior question is: "Wie ist Gemeinschaft überhaupt möglich?" That must be cleared up first. But before that can be done, one must have already asked and answered the question: "Was heisst eigentlich möglich?" And so we have those metaphysical prolegomena on possibility—or rather, an historical introduction to metaphysical prolegomena; for as the author declares, before we set about discussing what possibility is, it is only meet that we discuss what other philosophers have thought. Dr. Faust's book therefore begins with Thales—and after more than 800 pages—just brings us to Meister Eckhardt.

To the reviewer the implications of this approach to the problems of social philosophy and pedagogy—i.e., to certain *specific* problems of possibility, are more illuminating than the upshot of the author's historical analysis. And what they illuminate is the futility of this historical excursion in its bearings upon any *specific* problem of possibility. For even after the history is completed, it will be necessary to return to the determinate situation which constitutes the locus of the problem, and to discover what the possibilities of the situation are by an analysis of its structure, its prior history, the purposes of the observer, if these are relevant, and the available instrumentalities of carrying them out.

Dr. Faust's work must therefore be judged only as a history of philosophy. From this point of view, he has written an interesting book, for the familiar subject-matter of philosophy takes on a new light when it is treated from the angle of one special problem. This method of philosophical historiography—although not a new departure—is to be welcomed as perhaps the only relevant historical approach to contemporary problems of philosophical analysis. For the course of the exposition suggests possible positions—in the present case possible positions on the nature of possibility—which may be explored anew.

There are two minor criticisms. In the second volume the historical continuity of the exposition is broken by an unnecessary excursion into the existential import of logical concepts from Petrus Damiani to Hegel (pp. 95-118). Throughout both volumes the footnotes carry forced comparisons between the theories of modern philosophers and those treated in the text. Thus in Volume I, pp. 250-251, references to Bolzano and Meinong are brought in to tell the reader what the Stoics meant, what they might have meant, and what they did not mean.

SIDNEY HOOK.

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JOURNALS AND NEW BOOKS

THE INTERNATIONAL JOURNAL OF ETHICS. Vol. XLIII, No. 3. The Validity of Axiological Ethics: *H. O. Eaton*. Legal Ethics: *H. E. Willis*. Ethical Attitudes of 623 Men and Women: *T. M. Carter*. Rationalization of Race Prejudice: *W. O. Brown*. Isocrates' Political and Social Ideas: *P. G. Nesperius*. Socratic Method and Aristotle's Definition of the Good: *S. H. Brown*.

THE PERSONALIST. Vol. XIV, No. 2. (Special Henri Bergson Number.) Bergson and Personalism: *R. T. Flewelling*. The Dying Hadrian Addresses His Soul: Verse: Translation by the late *H. W. Carr*. Thought Affinities of Schelling and Bergson: *Herman Hausheer*. Bergson and the Art of Life: *Marjorie S. Harris*. Man's Future on the Earth: *F. C. S. Schiller*.

AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XI, No. 1. Realism versus Relativism in Ethics: *John Anderson*. The Ethics of Nicolai Hartmann (I): *W. R. Boyce Gibson*. Psychology and Radio (I): *A. Nechaev*. Gregariousness: *D. O. Williams*.

REVUE PHILOSOPHIQUE. 58 Année, Nos. 3 et 4. Art et Vérité: *E. Souriau*. La jeunesse de la science hellène et la formation des grandes méthodes de la science: *A. Rey*. L'homme et le langage: *P. Landsberg*. Dans le taureau de Phalaris (suite): *L. Chestov*.

Boas, George: The Happy Beast in French Thought of the Seventeenth Century. (Contributions to the History of Primitivism.) Baltimore: Johns Hopkins Press. 1933. vi + 159 pp. \$2.00.

Cohen, Felix S.: Ethical Systems and Legal Ideals. New York: Falcon Press, Inc. 1933. xi + 303 pp. \$3.75.

Hocking, William Ernest: The Spirit of World Politics. With Special Studies of the Near East. New York: Macmillan Co. 1932. 571 pp. \$5.00.

Joel, Karl: Wandlungen der Weltanschauung. Eine Philosophiegeschichte als Geschichtsphilosophie. Lieferung 12 (Band II, Bogen 46-50). J. C. B. Mohr (Paul Siebeck). 1933.

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Lyman, Eugene William: The Meaning and Truth of Religion. New York: Charles Scribner's Sons. 1933. xvi + 468 pp.

Proceedings of the Eighth Annual Meeting of the American Catholic Philosophical Association, Detroit, 1932. 142 pp.

Tanney, Joseph P.: Sovereignty. Published by the author. Washington, D. C. 159 pp.

NOTES AND NEWS

The Executive Committee of the Eastern Division of the American Philosophical Association announces that for the present the work of the Appointments Committee will be carried on through the Secretary-Treasurer's office, which will act as a clearing-house for information between members of the Division desiring new appointments and appointing officers in search of suitable appointees. Institutions seeking qualified teachers of philosophy are invited to communicate with the committee. All communications will be regarded as strictly confidential. Address Professor Harold A. Larabee, J-25 Leverett House, Cambridge, Mass.; after June 1, 1645 Wendell Avenue, Schenectady, N. Y.

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MAURICE BAUM.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 3. February 2, 1933.

Word-Portraiture. VIRGIL C. ALDRICH.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 4. February 16, 1933.

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THE OBVIOUS IN ESTHETICS. II¹

IX

I HAVE said that much art seems to have a vocation. The instances I refer to as unforgettable were of this sort, as is also much of the Soviet art, something I have not seen. My last paper² was devoted mostly to religion and art. I must mention this functioning of art again, though I have mentioned it in my reference to the lectures of Mr. Anesaki.

I assume that the culture and civilization of much of early Greece, of ancient India, Medieval France and Spain—to mention only a few conspicuous examples—could not have been what it was without the religious character of each. And this religion could not have been the thing it was without its established ritual. A ritual calls for its place, its machinery, its actors. Greek temples with their sculptures and votive offerings, the temples and temple-sculptures of India and Egypt, the cathedrals of Bourges and of Leon and the hundreds of sanctuaries that dot the map of Europe and of great parts of the rest of the world, provide the sanctified enclosures where the ritual can be performed. In the Roman Catholic services, music is often deeply impressive through its beauty. The Oratorios of Bach were conceived as a ritual where a choir and congregation work together. Ritual, if it is not to fade into the vacua of modern Protestantism, must have a certain social efficiency and this is immensely helped by the solemn beauty of the sanctuary and its living ceremony. What happens there is the sort of thing that calls for beauty and which, without the art that is appropriate, would be thin and bare. This theme is far too subtle for me to analyze, but is not on that account of less importance. What I have tried to emphasize is the importance of religion as a social institution in human history at certain times, the importance of ritual to religion, and the value of art to ritual and to the world of collective imagination in which that ritual functions. Effectiveness here depends upon the power to put into some esthetic form, the collective imagination or sentiment of the

¹ Continued from preceding issue, No. 8.

² This JOURNAL, Vol. XXVII (1930), pp. 5-14.

community. The Parthenon was the house of Athena; the windows of Chartres spoke a language that to-day we have to learn, but this participation in the same imaginative superstition is a way of speaking the same language. It is a common citizenship in one world of the imagination. This religious art must be said to have a vocation. In that it is like the philosophy devoted to apologetics. Is that philosophy art? It is tool-technique of course, and where faith or superstition is ardent and personal, I must concede it is fine art too, though it may be very bad.

X

In this field a subject of great importance is the drama. I, myself, owe a great deal to the German theatre before the war. *The Weavers* by Hauptmann, and *The Powers of Darkness* by Tolstoi were very illuminating to me. The stage in France has been running down for a long time, but I have seen plays there, too, that contributed to something like intellectual standards. What I remember are plays by Molière, though there were many more. A sensitive picture on the stage of life and its complexities, always contributes to one's education. And what the cinema might so easily be worth needs no explanation.

For the past twelve years, or a little more, the drama here has contained much that is a real contribution to the education of those who can appreciate this way of presenting an idea. Such plays as *Street Scene*, *Many Waters*, *The Road to Rome*, *Porgy*, *The Moon in the Yellow River*, *The Barretts of Wimpole Street*, *Marco Millions*, *Volpone*, *Strange Interlude*, *Bird in Hand*, *He Who Got Slapped*, the work of the Irish Players, the plays of Shaw—until fifteen years ago—are surely something that makes one more concretely aware of social tragedy, of troubles and compensations in human living, of farcical contradictions within the human scene, and of the dignity and the deceit of its individuals. *Street Scene* struck me as a tragically accurate picture of what is present in every large city in the world. *Strange Interlude* seemed to me the most philosophical play I had ever seen.

General concepts, universals, can not be put on the stage except by presenting an illustrative situation; just as one can not paint the nature of potatoes except by painting one or more individual potatoes. Where the play or part of it means something more general than the stage picture by itself, the play stands for an idea which might be symbolized by many other plays. Thus I have found it useful to distinguish between the picture play and the symbol play. A perfect picture play without larger meaning was *The Age of Innocence* given here a few years ago. A complete symbol play was

Strange Interlude. Of course plays are often more or less of both types. A very fine one that is so, is Ibsen's *The Master Builder*.

I have spoken only of plays recently given in New York. I ought to mention *Hamlet in Modern Dress*—a rendering that brought the human essence of Shakespeare's tragedy home to me as no presentation in the original form had ever done.

All the plays I mention, except the *Age of Innocence*, are plays with a meaning, or something like it, and one is more alive by being acquainted with this meaning if one can picture it in some concrete scene. A picture that makes us more humanely acquainted with the human scene, more sensitive to frictions and compensations in it that we had not sensed before, is always educating in the better sense of the word.

Every play should be comprehended as belonging to its own time and place. We can, I think, hardly realize the value for mentality and imagination of the plays of Molière in the Paris where he lived and worked, and Tartuffe is to-day one of the great dramatic art works of the world. Think of *Chanticleer* with its exquisite intellectual satire and *Cyrano de Bergerac*, both by Rostand; Tolstoi's *The Powers of Darkness*, *The Weavers* by Hauptmann, Goethe's *Iphigenia auf Tauris*, and the great contribution made to our power of imagination by Gilbert Murray's translations of Greek drama, not forgetting Gilbert and Sullivan in the England of 1875-1885. There are plenty of translations besides his, but his seem to be the work of an artist. That seems to be what makes the difference.

With Aeschylus, we are close to the authority of religion, family loyalty, and tradition. Let me read a few lines from Nilsson's *History of Greek Religion*. Nilsson is a scholar of the highest rank.

The force with which the problem of vengeance seized upon men's minds is shown in the myth of Orestes, which according to a general assumption was elaborated in a Delphian epic. Who is the avenger when the wife has killed the husband? The son, hers and the murdered man's, is the logical answer. Apollo drives him to perform the duty of blood vengeance but also purifies him. And this is sufficient, for the son has only done his duty according to the decrees of ancestral law. The god approved of this logic but human feeling rose against it, as is shown by the version of the myth in Aeschylus and Euripides [p. 195].

Here in ancient drama we have art functioning in a way that makes the world richer and finer. Suppose the plays about Orestes had been badly written and constructed. They would not have been performed. They were symbol plays, and their efficacy, social and individual, depended on the quality of their art. It is not to the advantage of any exposition of an idea to make that exposition difficult or dull. But when the exposition is by method of individual illustration as in drama, poetry, or the novel, dullness is fatal. A

college course aiming at a humane intellectual understanding of *Die Weber, die Macht der Finsterniss, Tartuffe, Chanticleer, Strange Interlude, The Master Builders, The Story of Orestes, Street Scene*—such a course if competently directed would, I am sure, be of the greatest benefit to all that might take it.

Ibsen, Molière, Tolstoi, and all earnest and accomplished writers of what I call symbol plays function in this way; also Plato as “a dramatic artist.”

Recall the value of the plays of Hervieu a few years ago, and remember that priceless book, *The Education of Henry Adams*. Here we find art functioning as a tool, but it is an esthetic or art character that is responsible for efficiency. And in this way one grows acquainted with a type by knowing imagined instances of it in humane or intellectual art construction.

I may seem to mention art only in its solemn moments, which are, of course, the rarest. I never realized what the essence of comedy might be until I saw in Paris a play called *The Eve of Happiness*, of a happiness not attained. I said to myself, “Only a Frenchman could have written that, no Englishman could have done so. For the English have no eyes, they have only conscience.”

That may not sound as if it should be recommended, but it was a one-act piece that I am very grateful I was able to see. It was, of course, a work of art.

XI

If a city or community possess what I call art, it is a scene where the young, the humble, the spiritually sensitive or ambitious can rise to higher levels of imaginative outlook and appreciation. It is not art as the peculiar possession of a class that interests me here, but art as the natural functioning of a human trait—as something that we too often think of as a luxury and indulgence of the fortunate, but which somehow has its roots in biological human nature whose life is richer for possessing it.

It was about 1900 when a new type of museum, the *Kunstgewerbemuseum*, museum of handicraft art, was born in Germany, the museum of industry become interested in beauty, in adding the now-value to the tool value of implements. Collections were not permanent for there is an infinite variety of tools and likings are fluid; but here was an effort to give the worker and craftsman access to what he was himself spiritually interested in.

XII

As I have said, my concern here is chiefly with the value of art in the world once it is there. I am not so much concerned at present with the value and meaning of it to the one that puts it there. On

that point I fear I should be without opinion. One thinks of Whistler, the great egotist, and of Milton, Tolstoi, Bach, Leonardo, of the conscientious technician. Personalities, temperaments differ as much among artists as among bankers and engineers, perhaps more so, since art encourages the personal equation.

Pictures can have meaning as well as plays. We see them every day as cartoons, propaganda illustrations, the imagination using this technique just as Bunyan used his literary technique as the instrument of his intensely Christian imagination when he wrote *Pilgrims Progress*. A group of gifted German artists who, or most of whom, used to work for *Simplicissimus*, have coöperated to produce an effective picture book called *Reparations-fibel*. Here is the brief text of introduction. It is printed in four languages, and the explanatory label under each picture is printed in four languages. It is addressed to the more humane citizens of England, America, France, Spain, and Germany. Its authors say:

For upwards of eleven years the peace treaties have been a heavy burden to the world. Though Germany has had to suffer by far the most, it is growing more and more evident that not only the European countries, but the whole world forms one great community in adversity. No important member of this community of peoples, industries and commerce can be sick for any length of time without endangering the whole. All reasonable politicians and national economists agree that the serious trade depression from which the world at large is suffering is in reality but a consequence of the faulty liquidation of the Great War.

Starting out from this consideration an overseas merchant and a newspaperman conceived the plan for this illustrated work. Professor Olaf Gulbransson, Thomas Theodor Heine, Erich Schilling, Professor Schulz and Ed. Thöny, artists whose Munich connection with *Simplicissimus* has gained them a worldwide reputation, and the Berlin artist Oskar Garvens have contributed the pictures. Taken as a whole the pictures are intended to show the world how Germany has suffered since she downed arms, trusting in Wilson's fourteen points, and that a revision of the Treaty of Versailles is not only in the interests of Germany, but of all the world. With all due allowance for the artist's license, we feel that this purpose has been achieved in such a spirit that neither the pictures nor the text may hurt. May this book do its share towards bringing about the true pacification of the world.

The real text is in the pictures and the truth of that text is being realized outside of Germany today far better than when the artists made it. The pictures must be seen; no description of them could be of much value.

Another example of fine art used to convey a social philosophy is the frescoes of the Mexican painter, Diego Rivera, on the walls of the interior courts of the Ministry of Education in Mexico City and of the National Agricultural Academy at Chapingo. "The painful story of the Indian Mexico is here communicated by a great artist. The frescoes stand as a revelation and knowledge of the

forces that made the Mexican revolution, and the vision that was theirs at the moment of triumph. 'Erase the walls' was rightly one of the slogans of the de la Huerta counter-revolution but there can be no erasure from the minds and hearts that have once beheld them."³

Here we have the human spirit of the revolution in Mexico and its message in the kind of language that frescoes can speak. "These pictures must be seen. It is not possible to describe the feelings they have the power to arouse. To artists and to the rank and file of mankind alike here is a painter who lives in the new era" (p. 36). The illustrations that follow the introduction are admirably done, but pages in black and white can not give the life-size figures by Rivera frescoed in his characteristic colors.

XIII

Both beauty and ugliness are widely distributed in the world, much of it the work of nature. But if beauty is something that helps to transform experience to the latter's great advantage, it is natural that man should choose to have more of it and labor to produce it, for a long time perhaps unconsciously. And any man-made thing wrought with the intention of having this quality can not be put in a different class from any other man-made thing wrought with this same intention. I mean, of course, that in this respect they are of the same class and type. And if the Zeus of Olympia was a work of art, so were many Greek coins, so is the carefully artistic window-dressing of some hardware stores, so are some wallpapers, rugs, and tiles. I restrict too much perhaps by saying "some," for everything that is man-made with the purpose of producing beauty, distinction of a certain quality, intrinsic likableness is art whether others beside the maker like it or not. Ugliness can be used in this way too. Early in the war, a German torpedo boat destroyed the Lusitania. A medal was struck, not officially, to honor the event. One side shows the bow of a ship disappearing under the waves. The other side shows Americans in caricature buying tickets at a window where a figure of death is selling them. What we call beauty was avoided. The effect was a satire full of malice and imagination not unlike many of the best pictures⁴ in *Simplicissimus*. It was, however, a work of art, well designed, well done, full of impulse, interesting, and, I am sure, made in a German workshop, though for propaganda-purposes, copied in England.

Art often uses data that belong to a world of horror. Tragedy is an obvious example. Without it, *Macbeth*, *The Eumemides*, *The*

³ *The Frescoes of Diego Rivera*, introduction by Ernestine Evans. P. 9.

Ring and the Book, parts of the Bible, and plenty more could not exist.

Wherever beauty is, something must be beautiful, either nature-made or man-made. A Navajo bridle with silver mountings, some neckties, many old candlesticks, many advertisements are works of art. One often does not realize what artistry is behind much of the American advertising in sheets like the *New Yorker*, *Harper's Bazaar*, *Vogue*, until one sees how lugubriously it is done in England.

XIV

I have said that I am more concerned with the value and functioning of beauty in the human world than with the question how it got there. And yet, the question whether something is art or not does depend on how it got there. One who wished to show the futility of art might take his audience into the New Pinakothek of Munich. Technical skill as there exhibited is of the highest grade, and there are a few fine paintings, but as a whole it is a procession of dull and blatant pretentiousness. One of my saddest memories is a visit to the Ecole des Beaux Arts in Paris. Students compete for the prize of being sent to Rome and all competitors had at one time to paint a picture on the same subject, taken, as I remember, always from Roman history. The style and imagination looked like 1870. Perhaps this rule was owing to the fact that the winner went to Rome. But the spectacle of prize-winning canvases! It was to weep. Yet every one was a work of art, unless some competitor thought nothing of intrinsic excellence but only of winning the prize.

XV

And I have said that beauty improves and elevates things, though not necessarily in all respects. Even when it is dangerous, it does that. It may be that the serpent in the Garden of Eden was a beautiful serpent and Eve may have been of a loveliness that was persuasive. But keeping to the field of good intentions, I have asked, if something is improved, what is it that is improved and how? Miss Bunzel has collected many details of pottery decoration and also the explanations of what they signified to the Pueblo potters. Wherever design and craftsmanship may be said to be inspired by an idea, or by sensitive taste, as in the Brahms's requiem, the Mass in San Marco, the Passion Play as it used to be, the making of a fine organ or violin, the printing and binding of a perfect book, we have an instance of how tool things are lifted to a higher level by esthetic values.

XVI

Space is so limited, and the subject is so enormous; from the designing of a blank check to the trilogy about Orestes, to Virgil's *Fourth Eclogue* as understood by a cultivated Roman of the time of Augustus, and as understood by a pious Roman, a thousand years later; from the pattern of a modern dinner plate to the tapestries of the Apocalypse at Angers; from Walt Whitman to the art of Dante, which can not be separated from the mind of Dante, and that can not be separated from the culture that he was a part of. Art is sometimes a kind of language; it is like mythology, it functions, serving the imagination and taste of a time and place, serving the spiritual essence of a social culture. That spiritual essence may be thin, artificial, and diluted, but in proportion as it is more or less sensitively alive, its mythology, its poetry, its art is of a higher or lower quality. A culture without any art at all would be like a corpse, or a mechanical doll.

XVII

A few years ago, I picked up a history of architecture. It must have been written about 1880, only fifty-two years ago. Recently, two books have appeared, devoted to the more emphatically contemporary architecture, one with its text in Dutch, one with a most fine introduction by a French student of new esthetic problems from the point of view of the architect and engineer. Both are of great value to anyone interested in the interrelation of beauty and efficiency in architecture.

Here are a few of the illustrations. The volume with the introduction by a Frenchman has its pictures arranged in chronological order. Near the beginning comes the railroad station of Antwerp, and which is to the eye of to-day, rather a monstrosity due to excess of ornament. If one turns to the end of the book, one finds that ornament has disappeared. It is replaced by a harmony of spaces and masses, and this in adaptation to whatever purpose or function the building is to fulfill. Somehow this type of building seems more spiritually sincere than the kind that tries to smile at you with a façade of intricate and expensive ornamentation. This most recent style is something that no architect could have dreamed of before the very end of the nineteenth century. The history of architecture that I spoke of, of about 1880, contained no reference whatever to anything of the sort. The new kind is wholly or nearly devoid of ornament; in it the work of the modern highly technical engineer is greatly in evidence. What I call a harmony of spaces and masses is a direct function of the engineering prob-

lems of construction and adaptation. To compare any history of architecture written before 1880 with these two works is a revelation, and what strikes one is the forgetting of so much that only a little while ago was regarded as essential to beauty in architecture.

But painting, music, sculpture, drama, have gone through a similar transition, along the same path, to escape from under the lid. One thinks of Masfield at his early best, of the *Spoon River Anthology*, of Carl Sandburg, whose presentation of poetic themes is really in prose, though printed in lines that look to the eye like lines of verse. Poetry inclines a little to become prose because of its greater sobriety and simplicity. *The Testament of Beauty* by Bridges, spiritually as fine a man as I have ever known, is prose and should be read as prose in spite of the artificiality of the printed pattern. I greatly admire Edwin Robinson's poem "Sisera";⁴ it begins like this:

"From Taanach to Harosheth, by the river, Barak had driven Sisera and his thousands till there were only a last few of them alive to feel, while there was time to feel, Jehovah's hand and Israel's together, smiting invincibly." It is printed, however, thus

"From Taanach to Harosheth, by the river,
Barak had driven Sisera and his thousands
Till there were only a last few of them
Alive to feel, while there was time to feel,
Jehovah's hand and Israel's together,
Smiting invincibly."

In the case of Mr. Bridges poem, however, it was not until I read it as prose that I could read it at all. And having made that discovery in the *Testament of Beauty*, I could read *Sisera* with greater appreciation and response.

XVIII

How much does the world owe to Plato because he was so gifted a dramatist, such an artist in the presentation of human situations, and of the drama of ideas? What do we owe to William James because he could write, and to Gilbert Murray because he can? I am in the habit of pointing to his *Rise of the Greek Epic*, as one work of art and to Santayana's *Three Philosophical Poets* as another. If I were a mathematician, I could no doubt point to mathematical demonstrations as works that arouse the same kind of admiration. Poincaré says this. If Hegel had only been a fine writer as he was a great thinker! And what would the world have lost if Giotto, Tintorettò, Molière and the men who made the King James version of the Bible, had been bad artists instead of good ones.

⁴ Together with other poems in *Nicodemus a Book of Poems*, 1932.

XIX

A small book has recently been published on Leonardo da Vinci, his personality, his art, his career, his shifting more and more from the painter to the engineer and technician. The author, Mr. Bax, ventures towards the end to sketch what he imagines may be the style of art, so called, in the not distant future. What I have said about the revolution in architecture and the inclination of poets, with something to say, to say it not with flowers, but with prose, illustrates Mr. Bax's point of view. I will try to state that as briefly as I can.

Mr. Bax shows in his book how Leonardo began as a painter, became an extraordinary genius and was in later life far ahead of his time, how he came to care less and less for fine art, and became more and more absorbed in the mechanics of architecture and engineering. He began as an artist, he developed into a technician of unprecedented resources, and this transition Mr. Bax regards as progress according to nature. Leonardo is for him a microcosmic symbol of what we may expect. He reminds us that the worst painter of to-day can do what was once so difficult, just as thousands of young men can now construct a wireless apparatus because a few years ago the first makers found out how to do so. He quotes Roger Fry as saying that Leonardo discovered principles of color that were not applied in painting before the impressionists of the nineteenth century.

Mr. Bax writes:

Now that "true light" and "true perspective," the age-long aim of artists, can be achieved, at least in a high measure, by our worst practitioners, all painters are trying to substitute some new aim for the old one which was reached so long ago as Leonardo's time. To us it seems clear that painting is played out—that in Europe it reached its highest possible point in the sixteenth century, just as railway engines, we are told, attained their maximum of efficiency about fifty years ago. True, there are still some people, a small band, who care ardently about pictures; but even Mr. Fry admits, with admirable candour, that "deeply rooted as is the impulse to painting and sculpture in human nature, it would scarcely be an exaggeration to say that the average adult citizen of to-day would get through life with no appreciable difference if these arts had never come into being." It would be no exaggeration: but "the average adult citizen" of yesterday—that is, of three or four centuries ago—would have felt differently about the arts: and the explanation, to the plain man, seems to be clear. The arts, in a word, belong to an earlier phase of human society, to a level of the mind which is now becoming archaic. They are vestigial: and those of us who still care more for a picture than for a motor-car, for a book of poems than for a double-barrelled gun, are survivors of a bygone stage in human development.

We are reminded also that Sir Francis Galton found out that women have more visualizing power than men, and that men have less of it than schoolboys. The evidence suggests that the habit of thinking in terms of symbols or abstractions replaces the habit and

weakens the inclination to picture thinking, thinking in terms not of universals but of instances. The visualizing faculty, Mr. Bax continues, seems to be "uncivilized." To think in pictures or metaphors is barbaric compared with the abstract thinking of Kant, a Darwin or any Higher Mathematician. Such persons as these, therefore, are likely to lose, or never to possess, an interest in the arts. There are always survivals from more primitive stages of culture; whether and when that is to be regretted is another question.

But the test of the vitality in any art should be measured by society's active demand for it. In Homer's time, in the time of the Scandinavian skalds and finally perhaps, in the time of the troubadours and Chaucer, people congregated eagerly to hear a poem and relished the mild hypnotism of metre. Poetry persisted as a live interest a little longer in drama because the visualising faculty had to work less hard in a theatre. As this faculty slowly but steadily declined—being much damaged by the invention of print—people came more and more to prefer to be addressed in words rather than in images, and for this reason they lost the power to be excited first by sculpture, the most objective form of imagery, and then by painting. The next stage in their progress is marked by a preference for speech or literature that is unadorned, unpictorial and unemotional, as we see in the extinction of oratory and in the occultation of poetry by prose.

This in spite of its picturesque phraseology is very interesting, and it is well not to scoff at it. It is illustrated by the new architecture, in which the architect can hardly be distinguished from the engineer, and in which the decorator is like a curio in an antiquity shop. It is illustrated also by the discovery that poetry need not be written in verse, and that prose is more companionable to the severe beauty of engineering construction, a symbol of efficiency. I suspect, too, it is illustrated by the exit of romance from the stage, and by the engineering technique of contemporary music as well as by the appeal of that technique to imitative music. Sculpture surely is a brother of architecture unadorned. It may come to pass that to our descendants, a phrase like "Back to Mozart" may sound like one of fifty years ago, "Back to Kant." Add to this reflections on the fact of increasing quantity production, of more and larger incorporation of industry, of the dying away all over the world of what is intimate, local, and characteristic, a sort of tidal wave that one might call the Americanization of the cosmos—a picture begins to form in which art is so wedded to efficiency that personality and spontaneity keep timidly and respectfully out of sight.

Perhaps art has had its day. Mr. Santayana said so nearly a generation ago.

XX

I can say with all sincerity that I can not give any definition of art that is academically satisfactory, and that I feel no poorer on

that account. But I say also that if I could find such a definition, I should probably be poorer for it. For if art calls for spontaneity, so does the valuation of it, and a definition might interfere with just those appreciations and reactions I care most about.

I have used the words "fine art" to mean any man-made object, having enough endurance and stability to be an object of attention for some appreciable time, however brief, and influenced in its designing by a liking, conscious or unconscious, for what we vaguely call beauty. At the same time, I feel that this definition may be too restricted, for the word "beauty" is too precise. The important distinction is that between beauty (whatever that is) and use: But beauty, in the scope of meaning here required, may be any or nearly any non-tool excellence in an object of attention. Beauty or ugliness here must be that of an object. Passion, grief, joy, aspiration, hate, love, sincerity, cunning, though beautiful or ugly, are not of the substance of art-things.

XXI

It is, I suppose, naturally human for most of us to do as well as we can what we want to do, or have any normal interest in doing. The feeling of our own competence, of really finishing a task, of making something the way it ought to be made, provided we are morally free to do so, is more or less of a factor in our experience, and this is something like a sense of artistry, the enjoyment of craftsmanship. Students of primitive art are beginning now to try to understand it, though it is still largely a closed book, except perhaps the art of the North American Indians. I have spoken of the article by Maes and Lavachery, about the art of central Africa exhibited in Brussels two years ago. In the Congo, sculpture is a noble profession. In the Katanga country, only those of the highest aristocracy may carve objects and symbols of dignity, only they may wear on the shoulder, the little hatchet with its handle artistically decorated, the sign of their high social standing. They seem to be aware not so much of what we call physical beauty, something in which many tribes excel, as of the spiritual importance of certain, to us, monstrous exaggerations.

And yet instead of a physical model before him, the sculptor has his spiritual model in his visualizing imagination, something at the same time of his tribal pattern and very uniquely, very spiritually his own. His work is often a document that his fellow tribesmen can read. In this way, it resembles a medieval pictured window, showing details of Christian imagination and faith. According to Maes, the Congo artist is one that has something to say, a personality to express, and if he does that with any clearness, he produces a work of art. The great sources of what he has to say and express are

the strata of family, tribal and religious organization. If there is any sense of what we call beauty it seems to be an element in a higher composition.

This is not uncommon among ourselves. A professor of physiological psychology at Clarke University had a very useful instrument that was a bit of machinery. It cost here about \$45.00. He showed it to an English technician and mentioned the price. His colleague said "That would cost in England \$75.00, because the machine would have a more expensive finish in certain details, which would not, however, increase its tool value in any respect." We see here the interest of the English producer in making what to his mind and sentiment is a perfect tool. He feels that it would be unfinished without its perfect excellence in all respects, just as the Easter ceremony in Paris would have been imperfect with the organ out of tune. I have said that beauty is a subtle thing of many shadings, but it is an intrinsic value, and not a tool value of an object which may and often does have this intrinsic value also.

I am aiming more at a description than a definition; and there are other aspects besides beauty that seem to characterize the work of art, though it is the primary search for beauty that calls these forth.

I have mentioned conscious spontaneity, something equivalent to what has been called play in contrast to work; and spontaneity is the expression of personality. No nature-made thing could have it. This belongs to the embryology of art.

Quantity production by machinery turns out enormous quantities of standardized type in which beauty seems more and more superfluous and artificial. Spontaneity and personality seem turned out of the shop. And yet the coffee spoon and the coffee cup I showed as works of art, were not the only ones. I could no doubt have bought as many thousands of them as I cared to order. But machine production restricts the opportunity for design to a few souls. The shoemaker, the harness maker of older days still could do a complete and perfect piece of work;—the tailor is left though the department store is his enemy. This drowning of individual creativeness in the ocean of machine-made or shop-made quantity, even though it be not so mediocre, may be a tragedy in the world. It leads to the manufacture of inferior goods for cheap exportation. Architects say that the fine work of men of fifty years ago can hardly be found any more.

Is personality, human imagination, a necessity for art? I hardly know. Of course in many cases it enriches enormously. But would a work of art, though man-made and designed to be beautiful, cease to be art if personality disappeared? In cases like Giotto, Plato, Brahms, such works could not have been wrought except by human

souls and hands. Yes, but need those hands be stimulated by spontaneous personality? I suppose so. That does not mean that I need concern myself with how Giotto, Plato, or Brahms felt about it and I do not. But a wall of perfect Moorish tiling, made by a sort of quantity production: Do I need to care whether the artist behind them was uplifted or not? I can't see that I do. Do I care whether Phidias was happy or unhappy or asleep while he designed and directed? No, I do not; what I care about is what he and his men turned out, now that mankind can find it and have it.

The work of art, because it is so rooted in human nature, and because as an expression of personality, breeds spontaneity, must have the quality of sincerity. Sincerity, spontaneity, personality, may be crippled by the wishes of the buyer, but if the maker loses all response to his own sense of beauty, or of good craftsmanship, his work ceases to be art except in the sense of tool technique.

One other quality, I suspect, should be added to these, these being so far the aim to generate beauty, what I have called art's human essence, personality, spontaneity, and sincerity. To this I would add the sense of objectivity. It may be this definite impression combined with its human essence or with a sort of silent dignity that all good art seems to have, that seems to class it among what I called the un-touchables. But is this an aspect of something because it is art or because it is beautiful? Would a piece of bad art have it? Would a beautiful nature-made object have it? I incline to think it is not art but beauty that awakens this attitude of unconscious respect, so that while one might well wish to own whatever it is, it would be in order to act as its protecting custodian. And as I have said a number of times, most art is extremely bad.

XXII

Of course, I know this is only a little of what is to be said, but I promised not to stray beyond the obvious.

When I wrote that sentence, I thought it was the end of the paper, but now another volume of commentary occurs to me.

In general, I have made not beauty, but the aim at beauty, the essential element in the art compound. Yet as one looks at a modern comprehensive history of art, like Springer's *Handbuch der Kunstgeschichte*, in six encyclopaedia-like volumes, all tremendously illustrated, one wonders perhaps where are the miles and miles of bad art one has so industriously tramped past. The illustrations are all of selected specimens. Also one sees many plates of beautiful pictures and statues which represent subjects very disagreeable in themselves. And one sees plates of famous pictures and statues that represent objects that in nature are superb, or appealing or otherwise attractive,

but which are feeble or sentimental when translated into art. A dirty child is not likely to be a pleasant visual object but a picture of a dirty child may be a beautiful object. The reaction to the nature-made object is, of course, much more complicated. This explains, at least in many cases, why a disagreeable thing is often a most desirable theme or subject. But why should a really beautiful thing that it would be a privilege to look at, be a failure when accurately represented on canvas or in marble. Probably there are different reasons for different cases. Lord Leighton was a perfect technician, and his paintings were perfect representations of beautiful men and women, but are to-day something of a joke. I mention only the fact and I know it is easy to exaggerate. But if instead of men and women, Leighton had painted Chinese things of jade or utensils of bronze, or native mid-African sculpture; would his art be felt to be so inferior?

I think it would not. I do not try to say why. Perhaps we like to see a real man or woman treated as such, especially if handsome, and not offered as something posed in a show window.

What the painter or sculptor aims at is, we say, something more than surface values. In the case of jade or pottery, or bronze, we don't care much for anything else, considered merely as something to look at. I said long ago, that different things taste good, feel good, smell good, sound good, or look good, and that the word "good" stands for the same kind of *aisthesis* value in every case. But this primary value is blended with others of a different sort.

There is the sense of artistry in dentistry, surgery, the work of the carpenter, perhaps in any profession or trade where fine technical manual skill is exercised.

Using the word "art," as I use it, such a book as Springer's Volume VI, devoted to art outside of Europe, contains pictures of objects which I am sure are not art, but are very interesting. And using the idea of beauty as of such central importance, it has to be stretched to cover so many things. Whether Plato or Pindar or Sophocles would say that a drifting sun-lit cloud, the moon-lit sea, a mountain, was *Kalos*, I don't know; but the words "*Kalos*" and "*Kalia*" are far more elastic than the English word "beauty." *Kalos* was, I think, anything to be admired, and to admire is not quite the same thing as to approve. It is more spontaneous than reasoned, more expressive of personality, more alive with the essence of any work of art.

Restricting our subject-matter to man-made things, and these may include nature-made things in so far as we poetically read into them a human essence, i.e., use nature as our raw material, and excluding also whatever is made only with the purpose of making a

tool, however lovely the thing may otherwise be, I incline now to say, because it seems so obvious, that any work of art must be wrought with the desire or instinct to make something that is *Kalos*. For I am convinced that many things are *Kalos* that we should hesitate to call beautiful.

In Gilbert Murray's translation of the *Medea* there is a part of a chorus that is beautiful in English and I assume not less beautiful in Greek. But I think it is more than beautiful. I wish I could read from the translator's introduction but there is space to say only that Jason and *Medea* have just parted, he to marry the princess of Corinth, she to kill her children by Jason. Now comes the chorus. I have known it to be of healing value, a tool value in two or three human cases. It brings something to the reader that is more than the beauty of *aisthesis*. It is like *The Symposium*. (Murray, *Medea*, p. 35.)

Alas, the love that falleth like a flood,
 Strong-winged and transitory:
 Why praise ye him ? What beareth he of good
 To man, or glory?
 Yet love there is that moves in gentleness,
 Heart-filling, sweetest of all powers that bless.
 Loose not on me, O Holder of man's heart,
 Thy golden quiver,
 Nor steep in poison of desire the dart
 That heals not ever.

And that is art,—written by one artist—and translated by another. Some one may say: That is all obvious enough, though I would phrase it differently. But what of it? and I would have to say: I hardly know, probably not much. But, if it is true that whenever we are living at all, we are living now; then to my innocent dialectic, it seems that ultimate values are now-values, and that the quest for certainty must be a quest for them, or for the technique of obtaining them. Art values do not by any means comprise all now-values, but an acquaintance with them may help us to a more appreciative picture of experience. What, then, does all of this come to? A loose and casual way of putting it is to say that fine art is any human effort to give to objects in the world of experience the now-values we spontaneously like them to possess, and to give to tools such now-values of their own as will make the using of them less irksome,—and them more easily efficient as instruments in controlling the now values still to come. Experience seems inevitably a scene of *aisthesis*, and what I am more and more inclined to call the quest for certainty is the search for the way or ways to give this *aisthesis* the quality and character we most esteem as fruits of our endeavor and technique. To-day is the cradle of tomorrow, but

to-morrow will presently be to-day. This, it seems to me, provides the universe of discourse of what we have learned to call instrumentalism in its relation to the sequence of now values from birth to death; it is the final constant with which empirical esthetics is concerned.

Art is constantly a symbol, often of what is vulgar as well as of what is spiritually fine. It is often symbolically expressive of affection, of sympathy, of deep respect, never, I think, merely of malice; or if it is so used, it is used as a tool. And of course malice can use artistry and blend its mood with the artist's mood.

A small picture bought and hung in the bare room of one that will be happier both for it and for the way it came; or a single flower in the vase or bottle selected as just the right one for it; or a sensitive composition of flowers, and used not as an ornament but as a gift that is understood: art is always an arrangement of what is provided by nature. Art, like metaphysics, gives us another world to live in, or if not quite that, it modifies the one we have.

Approaching from any angle the theme I have been playing with, one comes more and more upon a subject-matter where intelligible categories seem only to misrepresent. Not that the present writer is a mystic; he is as far from that as anyone. But the language of spontaneity is also understood when the speaker concedes frankly that he talks not about things, but about intimate reactions to them. So I venture to say, remembering as I do so the futile imbecility of so much of the world, its vulgarity, its cheap mediocrity, its esthetic ugliness—I venture to say that beauty is an aspect of experience, a lyric note in normal living, something that by its presence in the world brings quiet happiness to those that care for it.

Everyone must know that happiness, especially perhaps that strange happiness of romance, casts a subtle glamor on the world of *aisthesis*. It seems to work both ways. Beauty on its side generates a harmony that breeds a quick contentment, responsive to opportunities, playing into energy and quick decision. And art is what is wrought by human craftsmanship to give the world about us the note of spiritual companionship, something that is best when fashioned by ourselves and not inherited from a faded culture. Such phrasing may be far too lyrical, but it has its element of truth.

In spite of this, art can be morbid, the voice of sneering hostility. If it be really morbid we can understand it, its genius, its distinction. Or the hostility that is pictured may be hostility to what the craftsman sensitively hates and would destroy in the interest of better things.

But art is to man more often like a flame to kindling, though the fuel may not blaze all at once. To others it brings peace, com-

fort, and release. Art is a child of the human spirit; that is its essence, and in this sense its essential values, however bad art it may be, are spiritual values characterized by sincerity and spontaneity and effort. And because art aims at generating what is *Kalos*, it is the human effort to produce this, to organize it, to possess it. Here at the end let me mention two types or classes of art I have had constantly in mind: the conspicuous and the inconspicuous. A bursting sky-rocket is an art thing. It is transitory but not inconspicuous. The Pyramids are conspicuous but not transitory. The beautifully printed page of a book is not likely to be conspicuous nor is it what I mean by transitory, as a smoke ring is. And the work of art may be anything from an ikon to a woodshed. But if something is a work of art, it is because it was designed and made to have other values than its normal tool values, something to stimulate admiration as distinguished from approval, making thus its intended contribution to the now that we are always living.

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MATHEMATICAL LOGIC IN MODERN POSITIVISM

THOUGH Comte's Positivism may be extinct as a philosophy the positivist philosopher is still with us. Indeed the old Positivism sounded a ringing note of natural certainty that has always made, and doubtless always will make, a strong human appeal. Comte's discovery of his Law of the Three States owed much of its former popularity just to the relief of the naïve realist who saw in the highest form of knowledge, Positivism, the complete riddance of the bugbear of metaphysics. The second stage in Comte's system of the development of human knowledge-attitudes, where the object is seen as exhibiting an ideal as well as a real existence, is simply counted out, and the phenomenon, like La Fontaine waking from a glorious daydream and discovering that he is "gros Jean comme devant," finds itself in the third stage as ordinary as it was in the first. As an object of "scientific" interest alone, it is even more ordinary now since it has lost not only its late metaphysical significance, but also its earlier religious value.

The fact that "science," the Latin equivalent of the Anglo-Saxon-derived word "knowledge," should have come to limit the scope of its significance to physical data at the same time that it gained currency as indicating the only valid knowledge is to be laid at the door of the positivistic philosophy. All philosophers who hold their beliefs ready for change at the scientists' changing verdicts on

the nature of reality are according to the degree of their dependence more or less positivistic. A late development of positivist thinking appears in Logical Positivism which takes its stand on the relativity of propositions with the consequent repudiation of a philosophical doctrine of substance as though philosophy were forced to this conclusion by the recent developments in physics. More than two thousand years ago the Sophists, following the Heraclitean doctrine of an eternal flux, had taught on the grounds of the relativity of knowledge that physical science is itself a vain and illusory pursuit. Before scientific headway could be made, the relativity theory had to be abandoned, and it was the Socratics with their new understanding of substance, adequate for their time as ours, who refuted the Sophists and made knowledge possible. Historically, therefore, the relativity-of-knowledge doctrine antedated the substance concept, which stabilizing the facts of experience kept them from walking off like Daedalus's famous statues. The modern positivist hopes to escape the empirical relativist's dilemma by establishing stability for the relations themselves. To accomplish this he takes for an out-and-out identity the profound analogy that exists between mathematical symbols and those that can be made to represent logical forms. Logical Positivism in fact presents itself as a new form thrown off by philosophical history—the combination of the facts of experience with the tautologous structures of symbolic logic.

To think of the union the new positivist believes takes place between the facts of experience and the equations of mathematical logic is to think of an arbitrary symbolism both as significant to the original meaning and as deduced from it. "To describe a fact," we read in an article by A. E. Blumberg,¹ "is to represent it in symbols, verbal or non-verbal; to explain a fact is to deduce the proposition describing it from a general law." If description on the above terms sounds suspiciously like shorthand, explanation is sheer legerdemain. The symbols that represent the fact can be transcribed, though they will represent it only to those who know beforehand what the symbols stand for; but the proposition describing the fact could be deduced from a general law only by what would involve the Alice-in-Wonderland procedure of deducing symbols from meanings.

To read meaning backward from, as well as forward into, a symbol is to confuse context and reference. In its referential aspect where thought is set over against words, language is mechanical, static; in its contextual aspect, on the other hand, language is living, dynamic. We do not think without words, but thought is not merely its expression in the particular syntax of word-forms. To borrow

¹ "Meyerson's Critique of Positivism," *The Monist*, January, 1932, p. 75.

from the phraseology of Plotinus, thought is a light that plays upon language rather than being the words themselves, but so surcharges words in use that they are, for the moment at least, thought, though in definition they are only symbols. It is difficult to give an adequate account of either the referential or the contextual element of language since some contextual aspect must be employed to express the referential and *vice versa*. Referentially, the language form is set over against the language content, but contextually the form and the content are indivisible. Students of modern foreign languages frequently confuse thought and word-form. On being told by her French instructor that French is practically without the letter "w," so rarely is it found in use, a girl asked incredulously: "How do the French say 'white' then?" Symbols, verbal or non-verbal, must have meaning read into them; their reference is as arbitrary in language as it is in mathematics, but we speak of all non-verbal symbols as language only by analogy. Non-verbal symbols, though language-forms of a dependent sort, can not be said to constitute language in the self-sufficient sense that we use the word.

As I have tried to show in an earlier discussion in this JOURNAL (Vol. XXIX, No. 10, p. 265), the equations of symbolic logic take the investigator too far from original meaning relations to make possible the founding of an epistemology on this form of logic. Instead of simplifying the structure of the proposition the use of further symbols for words really results in a new reference complex. The compounding of symbolization leaves behind all interests except the one of quantitative relationship. Because of the very paucity of content, context and reference come together in mathematics taken as language, and thus is insured fixity for the contextual aspect as well as for the referential. The attempt of the Logical Positivist to save relativism by stabilizing the relations of deducibility between propositions falls to the ground with his failure to justify an identity between mathematical symbols and logical forms. The mathematical forms are stable enough. The trouble with them is that they are *too* stable to be a real language. An algebraic code remains unchanged through century after century but a live national language² varies with each decade. This is because the context and the reference values of a language differ in the way that a traveler, for example, differs from his passport photograph, but in mathematics where use and definition coincide, the two are to all intents identical.

When non-verbal signs such as musical notations and arithmetical codes are called language, we are accustomed to regard this

² The reason science borrows its terms from the dead languages is because of the purely referential character that can be established for the latter.

terminology as metaphorical. A dilettante who was maintaining that music is not only a "universal language," but is capable also of going beyond words in the expression of "high thought," was invited by a friend to express one of these thoughts. "And I," added the friend, "shall whistle my reply to you." As a language, mathematics is no more self-contained than music is. Even in physical science the purpose of numerical measurement is only secondary to that of power over, or control of, "natural" objects. When Lord Kelvin told his beginning students in physics, "Measure in numbers what you are speaking of if you would know something about it," he did not ask in addition that they express in like mathematical fashion the fact that there are such things as light, sound, and so forth for the students to know something about. If, in our experience, mathematical reduction and synthesis show most obviously the ability of thought to abstract and correlate ideas, the mathematical side shows itself also as representative of only one phase, and a relatively unimportant one at that. The opinion expressed by Jeans that a mathematician presided at creation is hardly new with him—perhaps it wasn't original with Pythagoras—and is, like Plato's thought of a God who "eternally geometrizes," credible only as a figure of speech, though a poetic, moving one. The relation between mathematics and life has been admirably expressed in an article³ by F. S. Marvin from which I quote the following paragraph:

"Beginning as the simplest form of correlating our experience, mathematics has grown with the growth of that experience itself. It was the foundation of our ordered thought, and, as the building has grown, it has interlaced and held together its rising stages. Yet it is not the builder nor the dweller, and only in a subordinate sense does it determine the style. It partakes in the beauty, but does not inspire it. It gives us the lines of safety, the stability and the proportions. To fulfil these essential functions it must keep constantly in touch with reality."

Because it is impossible for the mathematico-logical equation to "keep constantly in touch with reality"—in this case, the original proposition—it can have no real significance either for mathematics or the facts of experience.

M. WHITCOMB HESS.

ATHENS, OHIO.

³ "A Mathematical Universe," *The Hibbert Journal*, Vol. XXIX, No. 3, p. 401.

BOOK REVIEWS

Religious Realism. Edited by D. C. MACINTOSH. New York: The Macmillan Company. 1931. 502 pp.

Realism seems to be a coöperative venture in our day. Like *The New Realism* and *Critical Realism* the present volume offers a group of essays by different authors who deem themselves to have a certain philosophical position in common. More realists have consented to be religious than were found to be either new or critical: the present volume contains fifteen essays by as many different writers. But "religious realism" is not another brand of realism to compete with those sponsored in the earlier books; indeed one "new realist" (Professor Montague) and two "critical realists" (Professors Rogers and Pratt) appear in the list of contributors to the present book. What holds the present group together is realism in a different sense, and the foe against whom battle is waged is not quite the same idealistic foe.

Professor Macintosh in his editor's preface sets forth the common aim of religious realists in these words: "Religious Realism, as the term is used in this volume, means centrally the view that a religious object, such as may appropriately be called God, exists independently of our consciousness thereof." No book needed to be written to prove that epistemological or metaphysical realists could believe in God. It is only an accident of the history of ideas that religious belief has at times seemed to belong peculiarly to idealism. The greatest achievements of Christian theology, not to speak of many another great religious tradition of human thought, have been built upon realistic foundations. The foe against whom religious realism battles, in spite of occasional arguments in the present volume against the arrogance of idealists in posing as the special guardians of spiritual values and religious faith, is really a kind of humanism. According to religious realism God is not to be regarded as a merely human program for the realization of values, a merely human symbol of noble hopes and aspirations, a merely human principle for the organization of life. Or, to put the matter positively, God is a metaphysical fact, a power with whom (though some of the writers would say with *which*) men may come in contact as they come in contact with the physical world or with each other. The first essay (that by Professor Rogers) takes Mr. Walter Lippmann as its antagonist. Other essays recurrently attack Durkheim for analyzing religion into "purely social" consciousness and explicitly reject any psychology of religion that treats mysticism and worship as communion with "our own best selves" or our own highest ideals. Religious realism means that religion must be taken realistically because reality must be taken religiously.

A divergence between two points of view, however, is only too apparent in the present volume. The divergence occurs over the issue of the personality of God. Some few essays speak for the "theological left" whereas most argue for a more strictly theistic position. Professor Wieman takes a stand that other contributors to the volume regard as differing but slightly from the humanism which most of the essays in the volume fiercely oppose. "God," he writes, "is that structure which sustains, promotes, and constitutes value" (p. 155). God is also said to be "process"; but the relation of structure and process is not made at all clear. God is that structure in the universe that is most worthy of devotion. He—or rather, in Professor Wieman's language, *it*—is a structure that at times may characterize a part of a man's life or a phase of some social development. But while Professor Wieman points out that human life can not be deified as a whole because so much of it is base, he does not make it clear that the divine structure, apart from its occasional appearance in human affairs, has any trait of personality or consciousness. Professor Hartshorne claims that God "is best thought of as a condition rather than as an agent" (p. 134). There is in nature an objective contingency; though we can utilize the resources of nature and depend upon regular sequences in events, we find utter impartiality in nature to our interests and a complete absence of any process that favors our wishes (except in so far as our wishes lead us to act). But also there is in nature a "process of individualization" that requires for its effective realization an integration of behavior; and this integration, when intelligently accomplished, results in the building up of strong character or "the higher self." God is thus that objective natural condition or set of conditions that makes possible character building. Professor Hartshorne also speaks of the "God self"; but I am in doubt how to take this phrase. God really seems here to be a self in this sense only, that selfhood is a "fictional character" which we attribute to certain objective conditions when we treat them as "a foil for the development of" our higher selves.

I hope I have not misrepresented the point of view of these two papers. If I have succeeded in being fair to them, I see in them a sheerly naturalistic philosophy strangely expressed in the inappropriate language of theism. I would join the editor of the volume in protesting against this procedure. As Professor Macintosh says in his long and competent essay, we are not warranted in "identifying God with something the existence of which almost no one has ever thought of denying" (p. 398). The atheist as well as the theist may accept contingency in nature, may find objective conditions that promote and sustain our human search for values, may find the moral

life implying certain ontological facts about the world in which the moral life occurs. Professor Macintosh seems to me thoroughly sound in objecting to those who say that "to live in dependence upon the cosmic and social environment for the achievement of our values is to have a belief in God" (p. 398). Professor Widgery does not incline to the "theological left" as much as Professors Wieman and Hartshorne. But I am troubled when I find him working up to the conclusion that "the experience of history suggests that a merely social interpretation of religion is not adequate to the nature of man" (p. 129). For "religious realism" rather requires the conclusion that a merely social interpretation of religion is not adequate to the nature of God!

Professors Lyman, Horton, Macintosh, Niebuhr, and Wright are more strictly theistic. (The same is true of others of the contributors; but they happen in their essays in this volume to discuss historical or controversial matters that do not call for an expression of conviction on the point at issue in this review.) Professor Lyman relies on the noetic value of the intuitions in which mystical experience may culminate. Professor Horton trusts in a "will to believe" (at least as a provisional method until knowledge is more advanced) for an interpretation of the cosmic basis of the spiritual life in terms of theism. Professor Niebuhr contrasts the dualistic and transcendental tendency of German religious thought ("with its pessimism and suspicion of all things phenomenal," p. 426) and the rationalism, individualism, and monism of American religious thought; and he seems to plead for deeper consideration of the degree of truth in the German philosophical tendency. Professor Wright finds in emergent evolution a warrant for a new form of the teleological argument that would be driven to postulate a personal, purposeful, self-conscious (though not absolute) God as explanation of the course of emergent evolution. Professor Macintosh gives a carefully reasoned account of "Experimental Realism in Religion" (pp. 307-409). "The distinctively religious interest," he writes, "is an interest in the relation of reality to values" (p. 312). And his essay culminates in expression of the conviction that a serious experimental interpretation of our human struggle after supreme values discloses a "divine-value-producing factor in the universe" (p. 378) which "is going on in the universe anyway, whether we coöperate or not" (p. 395). There is thus a "divine initiative" in the world which, when it becomes the inner drive of conscience in our own lives, may be "appropriately called the Divine Spirit, or Holy Spirit" (p. 396). But though God works more rapidly and successfully with than without human coöperation, he works in any case. Religious realism, so conceived, is partly a matter of faith

because it can not be fully demonstrated and partly a matter of intelligent criticism because it is formulated in harmony with all known scientific and historical facts. It is the theory that "this total divine reality, partly known, partly believed in, behaves as if intelligent and good because it is intelligent and good, and therefore essentially personal spirit, however much more than that it may also be" (p. 406).

A closing comment may be ventured, though I hope it will not be taken as a hostile criticism. To bring together such a group of "realists" as appear in the present volume is really to obscure the issue. The issue is not between realism and idealism; it is between theism and a kind of humanism. Of course some forms of idealism have fitted in with this brand of humanism; they have encouraged the supposition that reality is a kind of projection of human ideals and ideas and that truth is relative to personal satisfaction. But the prevalence of humanism to-day is not, I think, due to these idealistic vagaries; and for the purposes of such a volume as the present, idealism as a whole might as well be entirely ignored. The point at issue is the theme of Professor Macintosh's own essay. Dare we mutilate religious terminology to mean by "God" the cosmic conditions that make possible the living of a noble human life, even when we view those conditions altogether naturalistically? If so, belief in God may prove to be by definition equivalent to a frank and honest atheism. Dare we say that the cosmic conditions of our love and search for values are indicative of a personal power that seeks our coöperation? If so, belief in God may become the justification of a religiously joyful way of life. The issue is the personality of God. It divides into two hostile groups the contributors to the present volume rather than binds together realists *qua* realists. The metaphysical presuppositions of the moral life are worth analysis and are important to formulate; but they are not all that theistic religion is prone to affirm about the world in which we live.

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L'Hallucination: Philosophes, Mystiques. PIERRE QUERCY. Vol. I: Philosophes et Mystiques. Vol. II: Études Clinique. Paris: Félix Alcan. 1930. xxvii + 381 pp.; 559 pp.

A hallucination is commonly defined as a perception without any external object. Its occurrence, therefore, is a matter of interest to both psychologists and philosophers. M. Quercy represents this two-fold interest. In the first half of his book, he attempts "to follow in the history of philosophy the history of hallucination and to study the part it has played in the structure of the various philo-

sophical systems." His discussion of the theory of hallucination, however, is limited to the views of Spinoza, Leibniz, Taine, and Bergson, and he bases his analysis in each case on the thinker's treatment of the terms "image," "act of perception," "thing perceived." He finds that these three terms by turns are completely sundered, brought close together or identified, and concludes that philosophers have held two main views respecting hallucination. In one, it is reduced to an error of judgment; in the other, doubt is cast on the reality of objects. Thus, in Spinoza, hallucination is the assumption of the presence of an object when it is not present and in Taine it is a vivid memory idea projected outward. However, in Leibniz, since perception always takes place without an external object, hallucination can not occur. In Bergson, inasmuch as perception unites with the object, is in the object, is the object, hallucination, whether involving memory or perception, is impossible.

Having indicated the rôle hallucination plays in philosophy, M. Quercy turns to the part it plays in life and selects the mystical experience as exemplifying this. Mystics are familiar with hallucination—in a sense, that is their specialty—and they never raise any doubt about the reality of perception. The second part of the book, consequently, deals with St. Theresa: visionary, mystic, and ecstasy-monger. The author believes that St. Theresa may be studied independently of her psychopathological difficulties. On the latter point, he says, some believers have been far too respectful of scientific pronouncements and he expresses his surprise at religionists who sacrifice visions, transports, and ecstatic states to the exigencies of psychiatry. M. Quercy claims that one might maintain St. Theresa was a mystic *despite* and not *because of* her neurological deviations. However, he admits that one can not prove that visions with religious content possess a celestial origin which ordinary hallucinations lack, since the latter class of visions imitate the former. The most certain criterion, he decides, is the luminous certitude of one who is no longer the dreamer, but who is awakened to the divine light. The next criterion is the special effect of the Christian visions in the twofold heroism of intellectual and moral virtues, of action and renunciation, as seen, not in the industry of a Mary Baker Eddy, but in the modest writings and good works of a St. Theresa.

M. Quercy's failure to consider the influence of the mystical trance upon philosophical systems and to discuss Plotinus in this connection is a serious omission. Moreover, he straddles in his treatment of mysticism. According to religionists, the trance state is a means of contacting a divine source of knowledge. According to

Leuba and psychologists generally, religious mysticism is a revelation not of God but of man, and the mystic brings his theological beliefs to the mystical experience; he does not derive them from it. However, though the author states that luminous certitude is the warranty of mystical experience, yet he also admits that the religious vision of a mystic can be duplicated by that of an ordinary pathological individual. Hence he is driven to find his criterion in the effects of the trance on the affected individual's everyday behavior. Even assuming that this were true, which it is not, the application of such a standard to "post-trance" behavior would find the case for the unique authority of Christian visions breaking down.

Though the style of this work is involved and forbidding, and though the author neglects to make use of the findings of psychoanalysis, an indifference which he shares with most French psychiatrists, *Hallucination* ought to be of interest to students of mysticism.

GEORGE LAWTON.

COLLEGE OF THE CITY OF NEW YORK.

JOURNALS AND NEW BOOKS

MIND. Vol. XLII, No. 166. Andrew Seth Pringle-Pattison, 1856-1931: *H. F. Hallett*. Prof. Hallett's *Aeternitas* (1): *C. D. Broad*. The Rightness of Goodness (II): *P. Leon*. Logical Constructions (V): *John Wisdom*. Discussions—A Simplification of Lewis and Langford's Postulates for Boolean Algebra: *E. V. Huntington*. A Proof that Pure Induction Approaches Certainty as its Limit: *P. T. Maker*. Dr. Ross's Criticism of Kant's Theory of Duty: *A. T. Shillinglaw*.

PHILOSOPHY. Vol. VIII, No. 30. Plato and Natural Science: *G. C. Field*. Plato's Theory of Forms and Modern Physics: *C. E. M. Joad*. Spinoza's Doctrine of Privation: *Raphael Demos*. The Biological Approach to Philosophy: *A. D. Ritchie*. Relativity in Ethics: *G. R. T. Ross*. Right Actions and Motives: *P. Leon*. Everyday Philosophy of the Turkish People in Stamboul: *A. Hilmi Ömer*.

ARCHIVIO DE FILOSOFIA. Anno II, Fasc. IV. L'évolution du Spinozisme et l'accès qu'elle ouvre à la transcendance: *M. Blondel*. Il sapere e il credere nel razionalismo: *G. Tarozzi*. Sull'antitesi tra idealismo e realismo: *M. Losacco*. Intorno al concetto della "cosa in se": *F. Lombardi*. Realtà e pensiero: *U. Redandè*. M. Heidegger e il carattere ontologico della filosofia contemporanea tedesca: *W. Peiser*. Considerazioni sullo spirito dionisiaco e lo spirito apollineo di F. Nietzsche: *S. De Biasi*.

RIVISTA DI FILOSOFIA. Anno XXIV, N. 2. Il passaggio dal finalismo al determinismo nella teoria peripatetica dell'eternità del mondo: *R. Mondolfo*. Osservazioni sul "De Interpretatione": *G. Grasselli*. La filosofia pratica di W. Schuppe: *C. Goretti*. Edizioni e Studi Cartesiani: *G. De Giuli*.

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 32 Année, No. 2. L'Unité dans l'oeuvre de Jean-Jacques Rousseau. Thèse: *E. Cassirer*. Discussion: *V. Basch, C. Bouglé, E. Gilson, R. Lenoir, X. Léon*.

Galt, William: *Phyloanalysis*. Preface by Trigant Burrow. (Psyche Miniatures, General Series.) London: Kegan Paul, Trench, Trubner & Co. 1933. 151 pp. 2/6.

Geiger, George R.: *The Philosophy of Henry George*. Introduction by John Dewey. New York: Macmillan Co. 1933. xix + 581 pp. \$3.00.

Schaub, Edward L., editor: *Spinoza. The Man and His Thought*. Addresses delivered at the Spinoza Tercentenary. Sponsored by the Philosophy Club of Chicago. Chicago: Open Court Publishing Co. 1933. 61 pp. 75c.

NOTES AND NEWS

The annual meeting of the Mind Association will be held at the University of Birmingham Friday, July 7th. It will be followed by a joint Session with the Aristotelian Society. The program is as follows:

July 7: 8 P.M. Address by L. J. Russell.

July 8: 10 A.M. Symposium—"Imaginary Objects." *G. Ryle, R. B. Braithwaite, G. E. Moore*.

8 P.M. Symposium—"What can Philosophy Contribute to a Theory of Politics?" *A. Boyce Gibson, C. R. Morris, G. E. G. Catlin*.

July 9: 10 A.M. Symposium: "Must Philosophers Disagree?" *F. C. S. Schiller, C. A. Mace, J. L. Stocks*.

8 P.M. Symposium: "The A Priori." *H. F. Hallett, L. S. Stebbing, J. H. Muirhead*.

Applications should be made to Prof. L. J. Russell, 304 Hagley Road, Edgbaston, Birmingham, 17, England.

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Volume XXX. No. 3. February 2, 1933.

Word-Portraiture. VIRGIL C. ALDRICH.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 4. February 16, 1933.

Non-Being. RAPHAEL DEMOS.

Report of the Ninth Annual Meeting of the Pacific Division of the American Philosophical Association. DONALD C. WILLIAMS.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 5. March 2, 1933.

A Case of the Pathetic Fallacy. D. W. PRALL.

Logic as Language Habits versus Logic as Formal Truth.

MARIE SWABEY.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 6. March 16, 1933.

Immediate Empiricism and Unity. BRUCE W. BROTHERSTON.

Report of the Thirty-second Annual Meeting of the Eastern Division of the American Philosophical Association. J. W. ROBSON.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 7. March 30, 1933.

Is Idealism Realism? JAMES BISSETT PRATT.

Facts: The Logical Perspectives of the World.

SUSANNE K. LANGER.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 8. April 13, 1933.

The Obvious in Esthetics (I). WENDELL T. BUSH.

On the Nature of Meaning. FREDERICK ANDERSON.

Book Reviews. Journals and New Books. Notes and News.

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- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
Subscription \$5.50. 540 pages annually. Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00. 720 pages annually. Psychological literature. Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917. Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
Subscription \$4.00. 300-400 pages. Founded 1895. Edited by W. S. Hunter. An annual bibliography of psychological literature.
- Archives of Psychology.**—Columbia University Post Office, New York.
Subscription \$8.00. 500 pages per volume. Founded 1906. Edited by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
Subscription \$5.00; foreign \$5.25. Acting Editor, Henry T. Moore. Quarterly. 448 pages annually. Founded 1906. Abnormal and social.
- Psychological Clinic.**—Philadelphia; Psychological Clinic Press.
Subscription \$3.00. 288 pages. Edited by Lightner Witmer. Founded 1907. Without fixed dates (9 numbers). Orthogenics, psychology, hygiene.
- Journal of Educational Psychology.**—Baltimore; Warwick & York.
Subscription \$4.00. 540 pages. Founded 1910. Monthly (9 numbers). Edited by Harold O. Rugg and coöperating board.
- Comparative Psychology Monographs.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter. Published without fixed dates, each number a single research. Founded 1922.
- Psychoanalytic Review.**—Washington, D. C.; 3617 Tenth Street, N. W.
Subscription \$6.00. 500 pages annually. Psychoanalysis. Quarterly. Founded 1913. Edited by W. A. White and S. E. Jelliffe.
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Psychological Review Company. 900 pages annually. Experimental. Subscription \$7.00. Founded 1916. Bi-monthly. Edited by Samuel W. Fernberger.
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Subscription \$6.00. 700 pages annually. Edited by W. S. Hunter. Monthly. Abstracts of psychological literature. Founded 1927.
- Journal of General Psychology.**—Worcester, Mass.; Clark University Press.
Subscription \$14.00 per yr.; \$7.00 per vol. 1,000 pages ann. (2 vols.). Edited by Carl Murchison and an international coöperating board. Quarterly. Experimental, theoretical, clinical, and historical psychology. Founded 1927.
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Subscription \$7.00. 500-600 pages. Edited by John Dewey, Carl Murchison, and an international coöperating board. Quarterly. Political, racial, and differential psychology. Founded 1929.
- Character and Personality.**—Durham, N. C.; Duke University Press.
Subscription \$2.00. Edited by Robert Sandek and Ernest Seeman. Quarterly. Psychodiagnostics and allied studies. Founded 1932.

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The Meaning of Right and Wrong

RICHARD C. CABOT

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THE A PRIORI

THE *a priori* has at least two meanings not usually separated: derived from the mind, universal and necessary. Kant, author of our most important past discussions of the *a priori*, did not separate the two meanings. And Professor Lewis, whose recent book, *Mind and the World-Order*, contains our best recent discussions of the *a priori*, also keeps the two meanings together. Thus, Professor Lewis writes: "The *a priori* represents the activity of the mind itself," and, directly afterward: "That only can be a *priori* which is true *no matter what*."¹

The origin of both meanings and of their fusion lies in an epistemological outlook which, even to-day, must be conceded points of merit. Stated in traditional terms, the doctrine is that knowledge has a twin source, reason and sense. But sense-experience, it argues, discloses merely the here and now, the particular and contingent (Lewis's *quale*). Accordingly, if there is anything universal and necessary, not particular and contingent, it must have been derived from reason, or mind, and be independent of sense-experience. The universal and necessary, thus, is the derived-from-mind. And both are *a priori* in being equally independent of sense-experience.

I do not propose to discuss this epistemological doctrine. I propose simply to accept the view that the *a priori* is the epistemologically universal and necessary. In some of its forms, as we shall see, the universal and necessary is to some extent dependent on some sense-experience. But we shall see no reason for believing that it does not always extend, in scope and in validity, beyond the actual range of any such sense-experience. Whether the universal and necessary is derived from the mind, is a further question. I believe there is good reason for holding that, at least in some cases, such as the *a priori* for knowledge mentioned below, this is certainly highly doubtful. Accordingly, I propose not to include derived from the mind in the meaning of *a priori*. This will have the advantage not only of keeping our meaning of *a priori* single and free of a possible inner conflict, but of avoiding certain psychological and speculative complications well known to anyone who has tried to deal critically with the phrase, derived from the mind.

¹ Pp. 196-197; p. 197, italics in text.

I

A correct orientation to the problem of the *a priori* and knowledge is important. I believe this lies in discussion of a distinction between the *a priori for* knowledge, the *a priori in* knowledge, and *a priori* knowledge. An understanding of this distinction will make clear, I think, the relation between the *a priori* and knowledge, which is what is wanted. By knowledge throughout is meant human knowledge and human knowledge as we know it to be, which, I think, is all we can mean by human knowledge. The *a priori* is discussed simply in relation to this knowledge. No attempt is made to fathom the *a priori* in relation to knowledge in some hypothetical or utterly unknown past, present, or future state.

By the *a priori for* knowledge, the first *a priori*, is understood whatever, besides knowledge and intrinsic characteristics of knowledge, is universally required for human knowledge as we know it to be. Some illustrations of this *a priori* will be given in discussions below. Instances that may be mentioned at once, *a priori* at least for our knowledge of nature, are space and time. Neither is a judgment, or piece of knowledge. Both are, rather, constituents of natural phenomena, that which the judgments of natural knowledge are about. Yet space and time are required *for* judgment (not *in* judgment) if that judgment is to be a knowledge of natural phenomenon. To be a natural phenomenon, as we know it, an object must at least be in space and occupy time. Space and time, hence, are universal and necessary in objects *for* knowledge, if that knowledge is to be a knowledge of natural phenomenon.

The *a priori for* knowledge contrasts with the *a priori in* knowledge. The *a priori for* knowledge concerns characteristics in the object of knowledge, although it may also concern the subject; e.g., his necessary cognitive equipment. The *a priori in* knowledge, however, always concerns knowledge itself.

This *a priori* consists in those characteristics universally required of judgments to be pieces of knowledge. One instance is internal coherence. That is, if a piece of supposed knowledge, say, an inductive judgment, is internally incoherent, so that either its reference or its description is confused, it certainly can not, as it stands, be true—a piece of genuine knowledge. It is simply confusion. Internal coherence, hence, is universal and necessary *in* a piece of knowledge if it is to be a piece of genuine knowledge at all. Other illustrations of the *a priori in* knowledge are identity and diversity. And additional ones will be mentioned in a moment.

Kant believed that his table of categories summarized the *a priori* elements in our scientific knowledge of nature. This is, in some cases, debatable. For instance, causality and substance-quality do

not appear to be forms in natural knowledge. They are forms in natural objects, ways in which that which is known, not the knowledge, is organized. If *a priori*, they are *a priori* for natural knowledge, like space and time, not *a priori* in it. I say, for instance: "*A* is the cause of *B*." Causality, if here, is the way in which the two events, *A* and *B*, are together in nature. It is a relation internal to the judged, not the judgment. The relation internal to my judgment is not causality, but logical identity. *A*, as the subject-part in my judgment, is identical in meaning with the cause of *B*. And as in my judgment, *A* is not the cause of the cause of *B* or in any other relation except logical identity with the other part of my judgment, "the cause of *B*."

This point about causality, that causality is a relation between events, but not between their meaning, which is the knowledge of events, applies with proper qualifications equally to the other two relation-categories of Kant, substance-quality and reciprocity. These are also forms in which natural phenomena exhibit themselves, not forms in knowledge of them. I say, for instance: "*A* is a quality of the substance *B*." Substance-quality here is the way in which the natural entities, *A* and *B*, stand to each other. *A*, for thought, is related to *B* as a quality is to a substance. The relation internal to my judgment, however, is not substance-quality, but logical identity once again. *A*, as the subject-part in my judgment, is identical in meaning with a "quality of the substance *B*." And as in my judgment, *A* is not a quality of a "quality of the substance *B*," or in any other relation except logical identity with the other part of my judgment, "a quality of the substance *B*."

Some of the Kantian categories, unity and plurality, for instance, seem, however, to belong to the *a priori* in knowledge. They appear to be features which all natural knowledge to be knowledge must possess. All the categories were understood by Kant to be both *a priori* forms of nature, and logical functions or *a priori* forms in knowledge. Kant tried to ride both horses. As already pointed out, this does not seem to be true of the three central relational categories, which, if *a priori*, are merely *a priori* forms of nature; i.e., *a priori* for natural knowledge. But other categories, such as unity and plurality, taken abstractly, are so general that it is obviously possible to hold that in a general sense they are also universal and necessary characteristics of judgments, *a priori* in knowledge.

The *a priori* in knowledge, as above described, has a relation to the problem of rationalism and empiricism, which might be briefly mentioned in passing. Undoubtedly, all knowledge of nature arises with direct experience. That is, without sensation, an understand-

ing of nature is impossible. Empiricism, so far, was certainly justified. But there is another side. Judgments, to be knowledge, must fulfill certain universal and necessary requirements of rationality. They must be so-and-so: coherent, etc. This was a strong point in traditional rationalism. This point was summarized by Descartes when he spoke of clearness and distinctness. Clearness and distinctness are universal and necessary *in* those judgments which are to be knowledge.

One general question is raised by the whole preceding discussion, which should be answered here. What is the test for the necessity of which we have spoken? We have said, for instance, that space is necessary *for* natural knowledge, and plurality necessary *in* all knowledge. How can this be known? There seems to be only one way, namely, fair trial. Try to eliminate the allegedly necessary element in question. Try, for instance, to construct a piece of knowledge, or to find a piece of knowledge, without any internal plurality whatsoever. If that can be done, plurality is not a necessity *in* knowledge. And if it obviously can not be done, and I think it can not, I believe we must admit that, within our knowledge of knowledge, it is a necessity *in* knowledge.

II

Discussions of the *a priori* have usually been devoted mostly to *a priori* knowledge, the third *a priori*. Kant held that mathematics and mathematical physics were instances of *a priori* knowledge of nature, and conceived one chief task of his first *Critique* to be to show how such knowledge was logically justifiable. Kant held also that the first *Critique* itself stated a knowledge which is universal and necessary. The propositions of the *Critique*, under criticism by successors, have not proved to be as true as Kant seems to have believed them to be. But both here, and in his view of exact science, Kant was, I think, aiming at an important point. I will return to this in the next sections.

Professor Lewis's book also contains a doctrine of *a priori* knowledge. In an interesting article commenting on Lewis's doctrine,² Professor Murphy has pointed out an ambiguity in this doctrine, at least in regard to knowledge of physical nature. Professor Lewis appears to defend the view, although he also gives good grounds for denying it, that there is a knowledge of physical phenomena derived purely from the free activity of the mind itself, independent of external support, and remaining true of nature no matter what later experience of nature reveals it to be. Professor Murphy re-

²"Mr. Lewis and the *A Priori*," this JOURNAL, Vol. XXIX (1932), pp. 169-181.

gards such a doctrine as entirely erroneous. His point appears to be that the truth of judgments of physical nature is always determined, not by the mind's free will, but by the objective's actual character. The mind's free and independent activity by itself never determines any truth about nature, but, at best, merely what we intend to mean by the assertions in our judgments of nature, i.e., what they should be taken to refer to.³

To state it a bit differently, Professor Murphy's position is that if *a priori* means derived purely from the mind itself independent of all external support, there is no such thing as *a priori* knowledge of physical nature. I think we may agree with this position. At least we have already granted, above, that there can be no understanding of nature without sensation. In other words, no truth about nature is derivable from the mind working freely and without any coöperation whatsoever from some sense-experience.

This, however, does not entirely dispose of the problem of *a priori* knowledge. Besides derived purely from the mind, *a priori* means universal and necessary, a quite distinct and to us its only acceptable meaning. There remains, therefore, the problem of *a priori* knowledge in the sense of universal and necessary knowledge. As already said, Kant claimed to find such universal and necessary knowledge in exact science, and in transcendental philosophy, immanent metaphysics. I wish now to determine, in a way quite independent of Kant, what can be said for such a general view.

III

By immanent metaphysics we will understand here the attempt to determine the intrinsic character of the most basic principles of order in nature. That is, it is a critique of the presuppositions of the natural sciences. This is, perhaps, a narrow definition of immanent metaphysics, but it appears to be what Kant meant by it, and it will be sufficiently accurate, I think, for our discussion here of *a priori* knowledge.

Instances of such presuppositions of science are uniformity and causality. And the aim of immanent metaphysics, in regard to them, is to find a definition, or, less narrowly put, a precise statement of their essential properties. This statement should be free of ambiguity and incoherence, in short, meet the *a priori* demands of rationality, and, at the same time, to be *a priori* knowledge, it should be necessarily adequate to all instances of the presupposition under consideration, i.e., universal and necessary. This last demand is the important point. It would be fulfilled, I think, if the statement proposed, say *S* is *xy*, where *S* is causality, were shown by

³ *Ibid.*, p. 180.

analysis to be such that not only is any random instance of S , say T , clearly xy , but T may still be an instance of S with only xy , and can not be an instance of S unless it does have at least x and y , or xy . The statement, S is xy , true of T , would, then, necessarily be adequate to any and every instance of S , since the indispensable essentials of S would have been shown by the analysis to be at least xy .

It is not especially important, for our present purpose, to produce and discuss specific statements, or definitions of S , but several general considerations about such *a priori* knowledge in immanent metaphysics should be presented.

In the first place, such definitions, if attained, may legitimately be called *a priori* knowledge in the sense of *a priori* accepted in this paper. Fulfilling the demands of rationality, such a definition would be intelligible to all. But, more important, it would be necessarily valid for all cases of S . In the construction of such a definition, as I have said, some analysis of instances of S is involved. This analysis is such as to show that any random case of S , such as T , as a case of S , is not only xy , but must be at least xy , since otherwise, say when it is only x , or only y , it simply is not a case of S . In other words, such analysis shows that any random instance of S , to be an instance of S , need not be more and can not be less than xy . And this, I take it, means that any instance, to be a case of S , must be at least such as the definition constructed in the original analysis lays down.

The procedure in constructing such universal and necessary knowledge, in the second place, is not at all arbitrary. It is not a matter of stipulating, before all analytic experience of S , that hereafter S will mean xy , nothing else, and then ruling out all instances as instances of S , if they are not at least xy . No such free legislation by the mind is involved.⁴ The *a priori* knowledge attained, rather, as just explained, is based on some direct analysis of at least an instance of the metaphysical principle in question. The matter is not at all settled by stating before all analysis what you wish to mean by S . Professor Murphy brings this out clearly. It consists, rather, in showing, by an explicit analytic examination of direct experience, that any random case of S , such as T , is clearly what you wish to mean by S , and can not be less and must be as much if it is still to be a case of S .

One might indeed say, in the third place, that the *a priori* knowledge under discussion always involves an *a posteriori* element if one means by *a posteriori* merely the psychological fact of consultation with some instances. The knowledge attained, however,

⁴ This seems to be, at least in part, the view of Professor Lewis, *Mind and the World-Order*, Chaps. 7, 8; and is criticized by Professor Murphy.

is not at all particular and contingent, or a mere summary of previous experience; i.e., *a posteriori* in the logical sense. It is universal and necessary, and it is indeed universal and necessary simply because consultation with a case of *S* shows that the knowledge here correctly states what at a minimum at least any case must be to be a case of *S*. The validity of the knowledge attained, thus, extends to any instance of *S*, and it is not confined to the instance, or instances, experienced, which is the case with *a posteriori* knowledge strictly so-called.

I have said that it is not especially important for our present purpose to produce and discuss specific statements, or definitions of *S*. That, indeed, is the proper business of immanent metaphysics. The chief thing here is to understand what sort of thing such definitions are, or to get a correct understanding of *a priori* knowledge in immanent metaphysics. It may be pointed out, however, that there is no general reason why such knowledge should not exist. It is perfectly possible, unlike knowledge of nature derived purely from the mind, which is not so, since knowledge of nature, or at least human knowledge of nature, always requires sensation. The chief requirement for the possibility of this knowledge, I think, is a diversified set of analytically accessible instances of the principles in question. Given this, analysis has the external requirements for attaining the essentials desired. And it is obvious to anyone who has at all examined the matter, I think, that such instances exist and exist profusely, in regard to causality, uniformity, relation, event, and the other presuppositions dealt with by immanent metaphysics.

IV

Besides immanent metaphysics, mathematics and mathematical physics were considered by Kant to possess universal and necessary knowledge. The judgments of these sciences, he held, constituted an *a priori* knowledge of nature. As above, I wish to determine, in a way quite independent of Kant, what can be said for such a general view. First, physics.

The case of physics differs in one major detail from that of immanent metaphysics. Immanent metaphysics, in so far as it has to do with nature, seeks to deal with it in the concrete. In its more advanced mathematical form, physical science, however, often tends to be, not an analysis of concrete nature, but of models, ideal situations, extensive abstractions, which have been allowed to take the place of the concrete because simpler and more capable of swift, mathematical treatment. Frequently, laws of physics are the outcome of analyses involving weightless levers, ideal gases, closed systems, six-dimensional spaces, and so on. That is, they are, as

they stand, formulae descriptive of an ideal world, not evidently descriptive unreservedly of untidy nature.

The immediate attainment of the scientist here, nevertheless, is not different in principle from that of the metaphysician. He works with mathematics, not ordinary language; he deals with a constructed world, not actual nature. Yet his aim is simply to frame in mathematics a formula which will hold for the sort of situation he has under consideration. Moreover, the sort of situation under consideration can in general have nothing in it except what the scientist has already admitted into it in the situation immediately before him for analysis. This is the advantage of a substitute construction, the specifications can be made once and for all. Accordingly, the formula which expresses satisfactorily the character of the situation before the scientist for analysis, will necessarily fit all cases of this sort of situation. If true for the initial construction, it will be true necessarily for every other such construction. Thus, the immediate outcome of the physical scientist's efforts here, after all, is simply a body of *a priori* mathematical truth, although not about nature, but about a constructed world which has been allowed to take nature's place.

Some have said that this is the correct way of interpreting Kant's beliefs about the judgments of mathematics and mathematical physics. They are a universal and necessary knowledge, not about things themselves, but about a humanly constructed world. Since our interest here is not the interpretation of Kant but the discussion in contemporary terms of a problem he stated, it is not important to debate this matter at any length. No doubt it is a suggestive interpretation, although much can easily be said against it. After all, Kant did not think of the phenomenal world as a consciously formulated body of ideal entities deviously derived from nature. The phenomenal world was nature. And it was constructed, not by conscious formulation, but by sub-conscious synthetic processes; and it was constructed, not out of fictions, abstracts, ideal entities, but out of the concrete welter of sensuous materials.

In regard to nature itself, as distinct from a consciously constructed world, mathematics and mathematical physics wear a somewhat different character. The aim and attainment of each appears not to be certainty, or necessary truth about nature, but simply probability. One aspect of the case of mathematics is summed up by Einstein when he writes: "As far as the laws of mathematics refer to reality (nature) they are not certain, in so far as they are certain they do not refer to reality (nature)."⁵ And the mathematician, on the whole, appears to be content with such a state of affairs.

⁵ *Sidelights on Relativity*, p. 28.

Much the same thing may be said about physical science. It seems content to attain merely hypothetical generalizations, usually statistical, not applying accurately, as they stand, to that individual routine which alone is nature in the concrete.⁶ In certain cases, to be sure, natural science appears to attain a sort of *a priori* in regard to natural fact. For instance, oxygen and hydrogen appear to be universal and necessary elements of water, that without which water can not be, hence *a priori* essentials. Such *a priori* results, even if moderately extensive, seem, however, to be accidental by-products in a general search for satisfactory probability generalizations, not the central aim or attainment of natural theory.⁷

Much of the comment in the preceding section on the *a priori* truths of immanent metaphysics, applies, with qualification, of course, to such *a priori* knowledge as attained by the exact sciences.

This knowledge, in the first place, is here understood as *a priori* only in the sense of being universal and necessary, not in the sense of being derived from the mind. In the case of formulae for a constructed world, this knowledge might legitimately be said to be derived from the mind. But even in this case, our contention is not

⁶ "Uniformity and Induction," this JOURNAL, Vol. XXIX (1932), p. 143, mentions several of a number of important references on this point.

⁷ Morris Cohen, *Reason and Nature*, p. 137 ff., holds that *a priori* knowledge consists of those propositions which must be presupposed and can not be proved or disproved within the system to which they are *a priori* (p. 138). The logical result of such a view, I think, is that *a priori* knowledge, so long as it remains *a priori*, must always be hypothetical. A point we have meant to stress in Sections III and IV, however, is that if any knowledge is properly to be called *a priori*, it is always demonstrative, not hypothetical. Now, it seems to me, that Cohen's actual discussions of *a priori* knowledge fully bear out this point of ours, and not the strict logical result of his own definition of *a priori* knowledge already mentioned. For example, Cohen gives two major instances of *a priori* knowledge: the general laws of physics in relation to special branches of physics, and the general laws of mathematics in relation to special developments in mathematics (pp. 143-144). As to the former, I believe it is very questionable to say that the general laws of physics, by which I understand such laws as those of motion, gravitation, etc., can not be disproved by investigations in some special branch of physics. Certainly some of them have been at least indirectly upset by investigations into the speed of light, etc. And if this is so, clearly it follows that the general laws of physics are not *a priori* knowledge in Cohen's own definition of such knowledge. In other words, Cohen's first example is mistaken. This is our view—the general laws of physics are probability generalizations about nature, not *a priori* truths. As to mathematics, Cohen himself admits that *a priori* propositions of mathematics are demonstrative, illustrates this, and concludes that "in the realm of logic and mathematics, then, we have absolute *a priori* truth" (p. 144). I have already indicated my own view that the mathematician, in dealing with his private subject-matter, but not with the subject-matter of the experimental physicist (nature itself), can attain *a priori* knowledge. The point here is that Cohen himself shows in this discussion that knowledge which is *a priori*, genuinely *a priori*, is not hypothetical, but apodictic (demonstrative).

that this knowledge is *a priori* in this particular sense. Such interpretation is irrelevant to our thesis. In the second place, this knowledge is, in all cases, not a matter of pre-analytic fiat. Even where it concerns consciously formulated structures, it is the outcome of an analysis of instances or an instance of the construction in question. This means, in the third place, that like the knowledge in immanent metaphysics the knowledge here is, in a sense and to some extent, *a posteriori*, provided, to be sure, that by *a posteriori* is understood here merely the psychological fact of consultation with some instances. This knowledge, however, is *a priori* in the strict logical sense. That is, it is not particular and contingent, a mere summary of previous experience, valid only there. It is perfectly general, and valid necessarily for all experience of the sort of fact, abstract or concrete, ideal or natural, which it professes to be dealing with.

V

These brief discussions complete our survey of the relations between knowledge, particularly general knowledge, and the *a priori*. These relations are correctly summarized, we have held, as the *a priori* for knowledge, the *a priori* in knowledge, and *a priori* knowledge. The major problems of generalization, or general knowledge, may be said to swing between two poles, probability and the *a priori*. Recent discussions have been occupied a good deal with probability. Professor Lewis has lately brought the *a priori* once more to the fore.

In this paper, the concern has not been to enumerate exhaustively the detailed instances of the *a priori*, and to demonstrate each case to be indisputably an *a priori*. That is an encyclopedic task. The aim, rather, has been to outline correctly the three major relationships, as we see it, between knowledge and the *a priori*, and to illustrate each relationship with such detailed instances of the *a priori* as to make entirely plain both its general character and real existence.

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THE FALLACY OF UNIPOLAR EXPLANATION

IS every action an *interaction*? Do *two* factors, at least, enter into every chemical, physical, mechanical, physiological, or psychological process or event?

I have come to believe that there is a common tendency to explain any occurrence by reference to a single element or factor. This seems to me a serious error. The correction of it entails in-

teresting and far-reaching consequences. I propose to call the error "the fallacy of unipolar explanation," or briefly, "the unipolar fallacy," or yet again, "the fallacy of unipolarity." In what follows I shall endeavor to expose the fallacy in connection with a number of traditional problems. I shall indicate in each case some of the consequences that seem to follow from its recognition.

The problem of the relation between heredity and environment affords a convenient starting point. And it offers a simple and obvious illustration of the fallacy.

It is plainly impossible to speak of hereditary tendencies apart from or unrelated to an environment. To speak of an "inherited tendency" can mean only that, in a particular situation, an organism will develop or behave in a specific manner. But what if that particular situation does not occur? It must be plain that the development or behavior which is conditional upon it will not occur either. If the environment be too unfavorable, the organism will not develop or behave at all. It will die.

On the other hand, it is just as plain that environmental forces act *on* something and that their operation is limited *by* something. The rational procedure, therefore, would seem to be to regard each term as the *limitation* of the other. To treat either of germ plasm or the encompassing situation to the exclusion of the other is as futile and unintelligent as would be the attempt to discuss one pole of a magnet without reference to the other. A simple rule would be to attribute to heredity only what can not be explained by the environment, and to environment only what we can not explain by heredity.

Woodworth has expounded these views in a clear and interesting fashion for elementary students in his revised *Psychology*. The effect of environment, he explains, will be seen in the uniformities it can impose upon diverse heredities or the differences it may produce in those that are similar. Heredity will be manifest in similarities persisting through diverse environments or differences arising in similar.

Human problems in this field are so complicated that as yet there seems to be no possibility of exact description. Recourse must be had, therefore, to statistical analyses of mass effects. It is gratifying to note that promising beginnings have been made.

Kant.—Kant's epochal *Kritik of Pure Reason* is essentially an enormous elaboration of the discovery that the process of knowing is inevitably bipolar. This is a discovery of permanent value. To any experience the mind, or we would say today "the organism," does contribute fully as much as the object or stimulus.

The entry of the mind into the knowledge process as the second

and very active "pole," Kant thought, made knowledge of the "real thing," or "thing in itself," forever impossible. To know what things really are, we ought to be able to view them separated from the disturbing and distorting activity of the mind.

But if the mind in a bipolar relationship vitiates or distorts reality, are any polar relationships in any better standing? Can we arrive at the "thing in itself" until we have torn it loose from every possible "entangling alliance"? But if we begin to object to polar relationships, where shall we stop in our search for the *real* thing short of an entity wholly unrelated to anything else? The "thing in itself" then turns out to be the thing *by* itself.

But can anything exist *by* itself? Perhaps there may be some stern magnificence about such isolation; but more probably it would merely be one of chilly, even appalling nudity. Every rag of quality is first stripped away (for qualities can be defined only in terms of interaction); and then our "thing" seems to have vanished with its garments. Perhaps, I am tempted to remark, in pursuit of them.

Things seem to be onions, to use another figure, rather than artichokes. When one quality after another has been peeled away until all are gone, no delectable heart or center or substance remains. If there be a relation at all, it is a mere center, a mere grammatical subject for verbs that would otherwise float in mid air.

Primary, Secondary, and Tertiary Qualities.—The ancient and honorable problem of the status of the various orders of qualities scarcely arises, if we abandon the search for the thing in or by itself. Secondary and tertiary qualities do imply some form of consciousness as one pole of a relationship. It is entirely meaningless to assert that grass is green or a Beethoven sonata superb apart from the consciousness upon which these may impinge.

In being bipolar, however, secondary and tertiary qualities do not differ from the primary. Secondary and tertiary qualities are no less "real," or essential, or constitutive of the thing. Primary qualities are just as truly bipolar or multipolar. The weight of an object, e.g., is probably not a relation between the object and any consciousness; but it certainly is a relation between that object and the earth. The form and extension in space of any object are well known to be the result of extremely intricate systems of relationships between the electrons, atoms, and molecules that compose it. Chemical properties, obviously, are only interactions with other substances. However we may push our inquiry, we find polar relationships at every stage.

Of all the relationships which an object may sustain, it seems arbitrary to select any as more real, more essential, or more consti-

tutive than any others. The "real thing is not to be defined by a few of its relationships alone—leaving the other relationships in some inferior status, as something less than "real."

We may, of course, select certain constellations of relationships as more *interesting* than others. We may find some more suitable for a particular purpose at any particular time. We may agree that some are of nearly universal and permanent interest, while others have only a limited or occasional significance. It is entirely legitimate to select any relationships we may choose for attention and discussion. But the qualities we choose are not for that reason more "real" than those we see fit to ignore—or may ignore because we didn't see them at all. Ignoring relationships does not reduce them to an inferior status or to fictions.

What do we mean when we ask, Is grass *really* green or beautiful? If "really" means in or by itself, i.e., in isolation from all other entities, grass is neither green nor beautiful. Certainly it is not green unless the light that shines upon it contains green rays for it to reflect. But by itself grass could not exist at all. The primary qualities would disappear as completely as the others.

If "really" means insulated only from any relationship to any form of consciousness, I think we must admit that grass is neither green nor beautiful. But why should we discriminate against just that group of relationships? Why should the relationships of grass to the soil, the water, the sunshine, and in general to the earth be "real," but its relationship to our sensory or emotional experience be something less respectable.

If, finally, "really" means in any relationships that can be truly affirmed of it, grass is just as "really" green and beautiful as it is anything else.

An extraordinary amount of confusion has resulted from the too common question whether secondary qualities are *in* the object or the observer. Some thinkers, not satisfied with either alternative, have located them in a rather mysterious "datum."

Of course no one really supposes that the relationship is one of spatial enclosure—as when a man may have money in his pockets. Things do not carry their qualities in pockets. Nevertheless the spatial metaphor obscures the simple truth that a quality is a dynamic interaction within which we can distinguish factors or "poles." The green-ness which we have been discussing is *in* nothing at all—neither the grass, the light, nor the observer. A number of processes converge and interact in such a way as to constitute an event—seeing green grass.

Epistemology should banish, it seems to me, such nouns as sensations, perceptions, or ideas. These are not things but events. To

describe the events we ought to limit ourselves to verbs. Organisms, we ought to say, sense, perceive, and conceive. Nouns serve to summarize these processes. Since grammar demands that verbs have subjects, we probably can not get along without words that at least have the form of nouns. But we should recognize that nouns immobilize the processes we are considering. And unless we are very alertly on our guard, that is fatal for clear thinking.

When verbs are thus made into nouns, the nouns almost inevitably form themselves into an impenetrable barrier between the mind and the object it would inspect. The mind, we discover then, can never know objects but only its ideas of them. This proposition contains four terms: (1) the mind—(2) knows—(3) its ideas—(4) of objects. All the perplexities and controversies of Idealism and the various forms of Realism follow this initial confusion.

But they can all be avoided, it seems to me, if we will insist upon using verbs to denote events and processes. We do not know our ideas. "Idea" is a noun denoting some part or aspect of the knowing process itself. If we wish to be precise, we must say that the mind, reacting to stimulation by an object, *ideates*. On this basis we may analyze the knowledge-event as minutely as we please. We may determine its conditions and the rôle played by each factor. We have not erected an impenetrable barrier between mind and object nor created an insoluble problem through an unnecessary confusion.

The Burmese language provides for the mention of qualities in a way that has much to commend it. It offers no grammatical equivalent for such a proposition as "Grass is green." In place of the three terms of our proposition it has but two. A simple suffix transforms the adjective into a verb. Grass, says the Burman, *greens*.

Is that not the best possible description of the fact? In a given complex grass functions in such a way as to cause an observer to see it as green. Similarly a musical composition may function in such a way as to be judged superb. And in general things acquire and contribute to qualities as they pass into and out of their manifold and varied relationships with other things.

Spontaneity.—The assertion that an event may originate utterly apart from any connection with other events is plainly an instance of the fallacy of unipolarity. A spontaneous event, originating absolutely *de novo*, is inexplicable and incomprehensible. To be either it would have to stand in intelligible relations with other things. It is almost as unimaginable as an ultra-violet color.

The question of *freedom* is obviously closely related to that of spontaneity. It is of such importance and interest, however, that

it deserves treatment at length in a separate paper. Freedom, I believe, means not the absence of any determination but a particular kind (or perhaps kinds) of determination. Moral freedom, I would suggest, is the capacity to be determined by the best.

The Polarizing Function of Thought. Subject and Predicate.—Whether all verbs must have subjects, I am coming more and more to suspect, is the fundamental problem of philosophy. Grammatically, of course, they do—at least in English. But is the only necessity that of grammar? And were the framers of our grammar competent metaphysicians? Does the polarity of subject and predicate result from the very nature of the events that must be discussed, or is it merely a rather rough and ready device for dealing with them? The consequences that follow from deciding one way or another are highly important.

If such verbs as to think, to feel, or to experience must have subjects, Descartes was right. He did establish a firm "Archimedean point." Souls are secure. And they must plainly be very different from those other things that merely fill space, move, or enter into chemical combinations. Souls, too, must be distinct from all particular experiences or even from the sum of them all. So they may be said to *have* their experiences. It would seem to follow that souls could exist, even though they might have no experiences at all.

One great question, then, perhaps the most important of all questions, as to the nature of the Universe is settled. A number of other questions, too, are laid to rest. If a subject can exist apart from any or all of its predicates, substances are more than the mere sum of their accidents or qualities. Things are to be distinguished from their relations. They are something more than mere intersections of relationships.

All this is very congenial to common sense and religion. The difficulty is to say what is left of a thing when we have stripped off its relationships, what a soul may be over and above its experiences, or what we may say of a subject except to affirm one or another of its predicates. The question becomes particularly perplexing, if we consider the verb "to be." Can we distinguish between a thing and its being?

We reach the best part of an artichoke when we have plucked off all its leaves. But a soul devoid of all experiences, a subject stripped of all predicates, a thing denuded of all its qualities or relationships, all these seem inconceivable.

The alternative, however, is scarcely more satisfactory. That alternative is to dissolve the subject wholly into its predicates, the thing into its relationships, the substance into its qualities, and the

soul into the flux of experiences. To exist, in this view, is to act. To act is to act on something. This other thing has its own properties. Hence to act is to *interact*. Interaction implies a system. To be, then, is to function as a center of interactions within a system.

The trouble with this otherwise attractive view is that the *things* seem to have disappeared. There are interactions; but when we ask *what* interact, no answer is possible. All nouns melt into verbs. Process is the one reality; but it is vain to ask what proceeds.

Subjects and predicates, all this suggests, are temporary cleavages made by thought for its own purposes in a reality that is essentially continuous and fluid. Every noun is an artificially immobilized section of a reality that is ever in flow. Bergson's famous illustration of the photographs that constitute a moving picture is, of course, familiar. Every picture is a "still"; it is into such static elements that thought analyzes movement.

There is no need to disparage the achievements of thought in its employment of the subject-predicate technique. That may very well be the only way in which we shall ever be able to think. But inevitably something will be lost. The finest achievements will be partial. Always there will be more to be said.

In effecting such cleavages thought powerfully suggests a swimmer forcing his way through the water. His progress is possible because of two opposite but equally significant properties of the water. It divides in response to the energy of his strokes. It immediately flows around the division and obliterates it.

In experience progress is possible because the order of fact yields to our subject-predicate cleavages, but forever flows around all the terms we can devise. Our insights are not false. They *are* partial. They are real achievements. But they are only momentary cleavages. Even as we affect them, reality flows around them and renders them inadequate. Something will forever elude our most refined conceptual devices. We can not weave a net with fine enough a mesh to stop the flowing stream.

Perhaps this is the very best thing that could be. It is no reason to despair. Rather it is challenge and inspiration. Just because there will always be something beyond the utmost refinement of scientific procedure or the highest elaboration of philosophic concepts, science and philosophy are splendidly worth while. We need never fear that they will leave us nothing further to investigate.

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BOOK REVIEWS

Ethical Relativity. EDWARD WESTERMARCK. New York: Harcourt Brace & Co. 1932. Pp. xviii + 301.

Westermarck opens his book with vigorous thrusts. He makes a downright "denial of the objective validity of moral judgments ascribed to them both by common sense and by normative theories of ethics" (Preface). "The *supposed* objectivity of moral values . . . implies that they have a real existence apart from any reference to a human mind, that what is said to be good or bad, right or wrong, can not be reduced *merely to what people think to be good or bad, right or wrong*" (p. 3, italics mine). Moreover, that rejected notion of a "real" good or right is given "an emotional foundation." All this seems to mean that a person of intelligence will not even *think* of the right *as* right, but will actually dispense with the notion altogether. The doctrine looks like the ancient sophistry; and all the Platonic-bred impulses in a philosophical reader are aroused, so that he tends to read on with a repressed polemical spirit which is apt to obscure his perception of what might be true in the position.

This fault in presentation applies not merely at the beginning, but to the whole book which is designed largely for the establishing of a negative. The opening chapters are on "The Supposed Objectivity of Moral Judgments." The first examines the diversity of opinion as to moral principles, notably as exhibited in Mill, Sidgwick, Spencer, Stephen, Paulsen, Bradley, and Rashdall. The second criticizes the notion of a general faculty or conscience, as well as the "supposed self-evidence" of principles, and it traces these unwarranted "suppositions" to common sense which is wont "to assign objectivity to our subjective experience," and to universalize what is merely customary, and to believe that to be very real which education, the prestige of men, and religion have deeply impressed upon them. The conclusion of this chapter seeks, however, to avoid a misapprehension, that the reference to the subjective emotions of men is intended as a disparagement of the moral judgments: "these are not arbitrary. We approve and disapprove because we can not do otherwise; our moral consciousness belongs to our mental constitution, which we can not change as we please. Can we help feeling pain when the fire burns us? Can we help sympathising with our friends? Are these facts less necessary or less powerful in their consequences, because they fall within the subjective sphere of our experience?" (pp. 58-59). Nevertheless a negative position does result from the argument, "that there is no absolute standard in morality . . ." (p. 59). And notwithstanding that some positive aspects are developed in Chapters Three to Seven, dealing with

"The Moral Emotions," "The Moral Concepts," "The Subjects of Moral Judgments," "The Variability of Moral Judgments," the chapters which contain indeed the significant material in the book, still the argument finally turns negative again in two chapters on "The Emotional Background of Normative Theories" where other ethical writers who think they are following reason are said to be actually the unwitting slaves of the emotional tendencies of their human nature.

Since the book is so largely a case against others, one is obliged to search out for oneself the complete theory of this author, who has something important to say because of his knowledge of social phenomena and history. What, according to him, is the origin of morality? (cf. p. 177). How is it morality comes to mean what it does for the developed consciousness of man? What, in short, does the position look like when it is expressed out of the context of an attack on other theories?

Morality is fundamentally a matter of feeling or emotion. Men feel resentment towards any cause of pain, and a grateful feeling towards a cause of pleasure (pp. 68, 87, 227, 260). When they are not immediately concerned, but onlookers, they feel a distinctive disapproval or approval over any conduct, or with regard to any sentient agent, that produces pain or pleasure in those who dwell within the area of their social interest (pp. 114-115). The moral emotions have the quality of either resentment or kindness, and are thus "retributive" in character. But their distinguishing mark as *moral* emotions is their disinterestedness, and above all, their impartiality (pp. 11-12, 75, 90-91, 111, cf. 276). This is the feature which needs to be explained. "The question to be answered, then, is, why should we, quite disinterestedly, feel pain calling forth disapproval because our neighbor is hurt, and pleasure calling forth approval because he is benefitted" (p. 96). The cue is taken from Polybius, and curiously enough from the same place to which David Hume referred in his *Enquiry concerning Morals* where he praised Polybius as "one of the gravest and most judicious, as well as most moral writers of antiquity . . ." (Green & Grose, *Essays*, 2, p. 204). Westermarck quotes as follows: "If a man has been rescued or helped in an hour of danger, and, instead of showing gratitude to his preserver, seeks to do him harm, it is clearly probable that the rest will be displeased and offended with him when they know it, sympathising with their neighbour and imagining themselves in his case. Hence arises a notion in every breast of the meaning and theory of duty, which is in fact the beginning and end of justice" (p. 70). That "sympathy" is, in the first instance, a sensitiveness to whatever affects those about oneself (p. 96). But it is more than

that, for "the associated animals take pleasure in each other's company, and with this pleasure is intimately connected kindness towards its cause, the companion himself, who is conceived of as a friend" (pp. 87-88). This "altruistic sentiment" is not only a "kindly emotion" but "above all a conative disposition to promote the welfare of the object" (pp. 96-97). Hence we should beware of thinking that the moral emotions arise individualistically, and we ought rather to remember "that society is the birth-place of the moral consciousness; that the first moral judgments expressed, not the private emotions of isolated individuals, but emotions felt by the society at large; . . ." (p. 109). Given a society, then, and those sympathetic and altruistic tendencies in play, we can now explain the rise of a sentiment which is disinterested and impartial; "Society is the school in which we learn to distinguish between right and wrong. The headmaster is Custom, and the lessons are *the same for all the members of the community*. The first moral judgments were pronounced by *public* opinion; *public* indignation and *public* approval are the prototypes of the moral emotions. As regards questions of morality there was in early society *no difference of opinion; hence a character of universality* was from the beginning attached to the moral judgments . . ." (p. 50, italics mine). "Custom is fixed once for all, and admits of *no purely personal preferences*. It is *equally binding* for me and for you and for all the other members of the society. A breach of it is equally wrong whether I myself am immediately concerned in the act or not; *this involves disinterestedness*. So also the condemnation of it is independent of the relationship in which the parties concerned in it stand to me personally; *this implies impartiality* in a larger sense" (p. 110, italics mine). Thus in their social situation men come to feel an emotion of approval and disapproval generally, and without regard to persons.

It is a proper consequence of this position that all the concepts of morality should be derived from this experience of life under the domain of custom. "Tribal custom is the earliest rule of duty" (p. 109). Duty is found, then, in the reaction against violation of custom: "The doing of what ought not to be done, or the refraining from what ought not to be refrained from, is apt to call forth moral disapproval; this is the most essential fact involved in the notion of ought" (p. 123). And this concept is quite "prior to that of moral goodness" (p. 120); and also to that of "right,"—"the concept of right, then, as implying that the opposite mode of conduct would have been wrong, ultimately derives its significance from moral disapproval . . . we must remember that language and popular conceptions in these matters start from the notion of a moral

rule or command . . . in other words, to have a moral right to do a thing implies that it is not wrong to do it" (pp. 126-128).

This view professes to account for "the variability of moral judgments" and especially for the development of moral ideas. "It is obvious that the expansion of the moral rules has been a consequence of the expansion of the social unit and of increased intercourse between different societies, and if, as I maintain, the range of the moral emotions *varies with the range of the altruistic sentiment*, there is every reason to assume that an immediate cause of the greater comprehensiveness of the moral rules has been a corresponding *widening of that sentiment*" (p. 200, italics mine). But none of this is due to "reason" (p. 203). "It will perhaps be argued that the impartiality which is a characteristic of all moral judgments required a universalization of the moral rules, and that this could only be accomplished by a *process* of reasoning, which gradually extended them to wider and wider circles of men and finally to the whole human race. But let us remember what the impartiality of moral judgments really implies. I have derived it from the fact that the retributive emotions which are expressed in the moral concepts are both disinterested, in the strict sense of the term, and are assumed by those who feel them to be uninfluenced by the particular relationship in which they stand to those who are immediately affected by the acts in question and also to those who perform the acts, or at the very least, that they are not knowingly partial. When a person pronounces an act right or wrong, it implies that *ceteris paribus*, it is so whether he, or some friend or enemy of his, does it to another; or another does it to him, or to some friend or enemy. *This impartiality has nothing to do with the question whether the agent and he to whom the act is done belong to the same or different families, tribes, nations, or other social groups*" (pp. 205-206, cf. 228, italics mine).

Here is the point at which criticism must begin. These disinterested and impartial moral emotions have been all along treated as a function of some actual society—the moral sentiments vary and develop with the *actual range* of the human association within which they are engendered; but now, it appears, they *mean* more than that and they run beyond the purview of the altruistic sentiment itself. What has been felt as applying *indifferently* to all *within* the social group is now felt *without any reference* to the range of that particular society and the feelings of men toward each other in it. The moral emotions here seem to contain within them a free *idea* as it were. And questions arise straightway: Is not this idea present from the start, even in the very "retributive" character of the emotions? Is it not the working of this idea in the minds of men that

has also had something to do with the very extending of the social order and the consequent "widening" of the altruistic sentiment? Indeed, Westermarck himself seems to admit something of the sort: "In early society we often find that the practice of revenge is *regulated by a rule that requires equivalence* between the injury and the suffering inflicted in return for it" (p. 72, italics mine). Again, "in the course of progressive civilisation the moral consciousness has tended towards a *greater equalisation of rights, . . .*" (p. 112, italics mine). And this is something very different from "*the indiscriminate attitude of early custom and law towards accidental injuries*" (p. 167). If these things are granted, is it not possible that morality is from the first something very distinct from custom, that it is, perhaps, essentially the *critic* of custom, that it "requires" or demands a true and equal rule and not merely a massive control in the society,—that demand for a rule always expressing a call for justice and equality. Are not such conceptions present, if only in a rudimentary form, from the start? Is there no such thing as a "primitive" notion of equality even in the demand for retribution? Is there no recognition of other persons as being of some account? Without such *personal recognition* is society itself any more possible than a world of objects without the *understanding* of the data of sense perception? It need not be urged, of course, that such ideas are the whole story. But surely the exclusive reference to custom and society is also not a complete account of the matter.

And further, the close relationship between morality and custom, and always harped on by writers on ethics, can be explained without wholly deriving the former from the latter. Morality always asserts itself against odds and against social use and wont, and so it has to lay claim itself to being custom too, but *the right custom*, and this claim is preserved in language for posterity as well as for the immediate generation which needs to be led out of its blindness to custom. In like manner those who have proposed difficult reforms in society have often pleaded that they were but restoring the pristine condition, the order of a Golden Age in the past, or else returning to Nature, itself a sacred order of things. Despite the tactical appeal to custom such reforms are very distinct from the customary and not really derived from it save in the sense that they are a correction or righting of it. Is not that generally true of the relationship of morality to custom?

Westermarck involves us here in a question which was argued out very thoroughly in the eighteenth century. There arose in the middle of that century a group of writers following the empirical view who challenged the ideas of Grotius and of various others believing in a "right of nature" and in the primacy of the idea of

right or justice. A contrary view had been asserted by Hobbes and it was developed more empirically, for instance, by Abbé de St. Pierre (*Ouvrages*, 1734, t. 2, pp. 107, 109), Diderot (*Suite de l'Apologie de M. Abbé de Prades, Oeuvres*, t. 1, pp. 454-455, 466-467), and by Rousseau, though only in the first version of his *Social Contract*, (C. E. Vaughan, *Political Writings of Rousseau*, Vol. 1, pp. 493-495, 1915). The idea of justice was treated as posterior to some convention of society; and it was from the utility of the rules which men learned to be necessary for a peaceable and secure life in society that they were supposed to acquire the *idea* of a fair or equal rule, which they then extended to the whole society of mankind. That doctrine was voluntaristic in character: men must act together in society if they are to survive; and, through acting so, they come to appreciate rules and laws of a common life, whence in turn they derive a general concept of a universal rule and good. It was Kant's achievement to raise that question all over again, the question as to the conditions of man's recognizing a moral law that is universal and binding on all alike. Now in this book Westermarek is reviving the pre-Kantian position. For him, as for the empiricists of that century, the moral sentiments have a public *import* merely because they are phenomena of a society or "public." The specious character of such an explanation appears the moment one insists on making a careful distinction between the agent and the observer in the case. (See W. Fite, *The Living Mind*, ch. 2). To an observing sociologist a society exists when people are together and show tendencies to act and feel in common, and live under custom. From the outside this looks like a "public" and there seems to be a "public opinion" expressed in the custom, and even an obligation, for it is observed to be "equally binding." But what is it to those who are living and acting under such a regime? As Westermarek describes the situation himself, the people are simply *indiscriminate and blind* in their mass reaction to any departure from the custom; they know *nothing* of either *bonds* or *equality*; they have no public opinion because they really do not have any opinion at all. And yet from the very fact of being under a blind, indiscriminate, brute control these same people learn to think and feel impartially, to discriminate and make retribution equal the offense and to pay heed to the reality of persons. In the eyes of the sociologist they were a society and a public even before they knew it themselves, and so their change from one state to another seems explained: they were *acting as a public* and so they *became* one in thought and word as well as deed; they were all indifferently under bonds and so they came to conceive of equally binding laws; they were devoid of any opinion of their own and so they had a public opinion, etc. The

real source of such confusion is the deceitful word "social," which contains harbored within it the meaning of equality and fellowship; and so it seems to be no jump at all to derive moral impartiality and disinterestedness from the social custom. Is it not more reasonable, however, and indeed more historical, to suppose that those meanings or ideas obtained in some form even in the "early" condition which is in other respects continuous with that of the civilized condition? And if that supposition is allowed, do we not have to describe any society that we can understand as having both custom and morality, and the latter as being a relatively independent phenomenon which can not be explained without attributing it to normative ideas as well as to the emotional tendencies of a social nature.

But the admission of any ideas whatsoever is debarred by the type of psychology to which Westermarck is committed. Moral emotions are the basis of the account, and emotions have no light in them, they illuminate nothing, they lack all "speculation." They are distinct elements or units in their own right, and they must be distinguished from all cognitions. But human experience is scarcely found to be so; the distinctions are thus the work, once more, of the observing scientist, and even he has yielded partly to the facts and recognized an organic relation of the emotional with the conative. But cognition is still a stumbling-block, and necessarily so, to a "voluntaristic" view. It is admitted very much on sufferance, as simply "awareness," or else as a non-committal "intellectual consideration." The function of reason is confined to "reasoning out" the means to any end which is set by conative interest. There is no suspicion here of any problem concerning knowledge. It is not even remotely considered whether or not *knowing* might not have objects peculiar to itself, or inject into human life demands or postulates or criteria by reference to which action as well as science is motivated and judged. Something of this sort is actually implied in Westermarck's constant use of knowledge as a foil to the notion of a "normative science" of ethics, but he is content to reduce the pretensions of ethics in that regard and does not examine farther into the character of true knowledge. Nevertheless the same question of "relativity" can be raised with regard to it as to morals, and the answering should take care of both questions.

However, Westermarck may be said to have scored against those who pretend that ethics is a "normative science." Such a claim "makes morality a matter of truth and falsity" (p. 3). It invites a fatal comparison of the so-called "moral truth" with truth as we have it in natural science. It exposes the extreme disagreement

of moral theorists as to the principles of their science. And they deserve the refutation, if we may call it such, because they have made morality too intellectual a phenomenon and they have ignored the manifest emotional and social forms in which it makes its appearance. They have confounded the genres when they join both "moral" and "truth" in one term. Both are normative concepts, and each is normative with respect to quite distinct aspects of human experience. The determining of action, of what ought to be done or what is right or good to do, is one thing; the determining of the truth or fact is another. The moral determination involves the ideas of duty, right or good; the scientific, that of the true or probable. We can discuss what ought to have been done so far as we are in a position to understand the intentions and the circumstances of those concerned in the act, but even when we discuss it or criticize, we are not judging of the truth or falsity of the decision, but its being right or good. Since, however, all communication and discussion of such matters must take place by means of language, the acts or decisions are expressed to others in the form of judgments. It is always a question whether the description of a moral determination is accurately conveying what it is. And other questions are also likely to arise, questions as to the intellectual consistency of what has been determined upon according to the account that has been given. Here truth is indeed relevant, but only to the intellectual *version* of the moral act. And doubt of it or criticism of it can send the conscientious person back to his moral problem which he must determine anew, but still it is *not* the truth that he then determines but his moral duty or good. Simply because all talking about morality must be in the form of judgments it does not follow that morality is a form of truth. That is the besetting sin of philosophy, to intellectualize everything because it itself is an intellectual discipline. The present polemic is in this respect justified as a reaction against such a habit of thought, and it repeats the phenomenon of the British moralists of the eighteenth century downing the rationalism of their day. Indeed Westermarck consciously affiliates himself with that worthy empirical company, Hutcheson, Hume, and above all Adam Smith: "For my part I maintain Adam Smith's *Theory of Moral Sentiments* is the most important contribution to moral psychology made by any British thinker . . ." (p. 71).

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Responsibility: Its Development through Punishment and Reward.
 LAURENCE SEARS. New York: Columbia University Press. 1932.
 Pp. ix + 198.

In this interesting and significant book speculative ethical theories and a socio-psychological technique of ethical adjustment meet on a fair field and, so far as observable evidence is concerned, speculative theories get a drubbing. From a consideration of the factors brought into opposition, it is obvious that the book should be highly suggestive both to the philosophical ethicist and to the teacher in the grade-school classroom.

The argument of the book falls into three parts. Part I, "A Survey of Theories of Responsibility," presents the theories of Utilitarianism—represented by Bentham, Mill, and Bain; of Evolution—represented by Westermarck; of Idealism—represented by T. H. Green and F. H. Bradley; and of the concept of "moral judgments as educational instruments of control"—represented by Dewey. Part II, "A Study of the Development of Responsibility in Twelve Children," presents a digest of twelve case reports of problem children whose social adjustments were effected by aid of a socio-psychological technique. Part III, "An Evaluation of Ethical Theories in the Light of the Empirical Data," submits the several ethical theories to criticism in relation to these twelve case histories.

In the author's emphasis upon "control," he exhibits a bondage to traditional Euclideanism which all biological theory, including ethics, must transcend if it would catch up with modern physics. But he is not alone in this respect. We are all more or less victims of the heavy hand of the past.

In our newer physics, we are learning to think of all reality as being a processal, space-time field, ever achieving its own further continuance of existence.

Such a conception puts beyond the pale the traditional, Euclidean authoritarianisms of whatever kind; and, with these, the conception of "control" as a description of the process by which "society," or the elder generation, educates and socializes the younger. Man controls no thing external to himself without being coincidentally controlled by it. The control is mutual. Education is properly a process of *assimilating* originally neutral and unoriented childhood into the social "field" or process. If "society" would help the young to develop social and species responsibility, it must begin as early as possible to initiate the young into the interests by which the species life must carry on.

In our speaking of adaptive behavior or reactions, we must overcome our Euclidean tendency to dichotomize organism and behavior. Any "reaction" that an organism "makes" is a change in the space-

time pattern of the very existence of that organism. We do not merely "make" reactions, we *live* them. And our concepts and objectives are current patterned tensions serving as cultural substitutes for objects, actions, or relations more or less remote in point of time or space, or of both.

There can be no responsibility save either upon an already current basis of native organismic tensions requiring consummation, or upon a basis of learned and accepted interests or objectives, also requiring consummation. Application of pain or pleasure stimuli in the absence of such motivation is meaningless. It has no title to the name of either punishment or reward. The experimenter with white rats recognizes this fact. We are often less intelligent in our treatment of human beings.

We need to differentiate between two kinds of situation in which pain may conceivably be applied as an instrument of education. First, as a means of securing orientation and motivation. But such treatment of an individual only motivates him negatively, for an avoidance of the kind of situation that has brought him pain. Hence result lying and other efforts at deception, perhaps in the interest of even anti-social consummations. On the other hand, once an individual has become positively motivated in reference to an intelligible objective, then the application of pain or annoyance for poor or laggard ways of attainment has meaning and some promise of efficacy. But how will you forward the process of cherishing a consummation by inflicting pain and thus associating pain with that consummation itself? You can lead a horse to water, but you can not make him drink—not by whipping or scolding; but you can, by feeding him salt and so intensifying his tensions requiring water for their release. This illustration may properly suggest that satisfying stimuli as intended reward are on a somewhat different footing from pain stimuli as intended punishment. They can promote both intended motivation and also effort directed towards consummation. The problem of socialized orientation and motivation, and hence of securing social responsibility, must be solved in positive and persuasive ways, as a phase of the process of social assimilation. To "control" others in desired ways, we must first control ourselves so as to afford them stimuli persuasively conducive to those desired ways. And the behavior of both the "controllers" and the "controlled" is an intrinsic phase of their very lives in the living. It is indeed a local phase of that self-weaving web of existence that we call the species life.

These observations are not offered as strictures upon the book, but upon our common ways of thinking, which—save for the concept of control—are but faintly exhibited in the book. The publishers

have done their work well, and the author has furnished a bibliography and index.

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Barrett, Clifford L.: *Ethics. An Introduction to the Philosophy of Moral Values*. New York: Harper & Bros. 1933. xi + 484 pp. \$2.75.

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NOTES AND NEWS

Dr. Felix Adler, after a brief illness, died on April 24 in his 82d year. To the readers of this JOURNAL it is unnecessary to speak of his distinguished career, of his great work in ethical theory and practice, and of the large circle of friends whom he has left to mourn his death and to cherish his life. As founder (in 1876) and life-long leader of the Society for Ethical Culture, and as author of many notable works on ethics, he has erected an enduring and living monument. Of the many honors and duties he held we mention that he was Professor of Political and Social Ethics at Columbia University since 1902; Roosevelt Professor at the University of Berlin, 1908-1909; Hibbert Lecturer at Oxford in 1923; President of the Eastern Division of the American Philosophical Association in 1928; and one of the founders and editors of the *International Journal of Ethics*.

As we go to press the news reaches us of the death of George Herbert Palmer on May 7 at his home in Cambridge, Mass. He was ninety-one years of age; senior member of the Harvard faculty. We join in expressing the sense of loss felt by his many friends, colleagues, and students. He will long be remembered as a philosopher and teacher and as the beloved "father" of an illustrious Department of Philosophy.

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Volume XXX. No. 5. March 2, 1933.

A Case of the Pathetic Fallacy. D. W. PRALL.

Logic as Language Habits versus Logic as Formal Truth.

MARIE SWABEY.

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Is Idealism Realism? JAMES BISSETT PRATT.

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The Obvious in Esthetics (I). WENDELL T. BUSH.

On the Nature of Meaning. FREDERICK ANDERSON.

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THE JOURNAL OF PHILOSOPHY

INDETERMINISM AND THE CONCEPT OF PHYSICAL REALITY¹

I

I SHALL begin this contribution to the symposium on Chance and Cosmogony with a brief discussion of chance. Chance characterizes the occurrence of events. In daily life we apply the term "chance"² to events which occur without intention. Thus we say that one meets a person by chance if the meeting is not the result of a purpose or intention. But we also apply the term "chance" to physical events which are recognized to be independent of human intentions. In this paper I shall discuss only physical chance.

Now physical events are characterized by laws of connection between events. Physical events can be ordered in causal sequences, so that a specific event may be described as the effect of other events. If an event can not be exhibited as a member of a system of sequences we ascribe its occurrence to chance. An event whose causal antecedents can not be demonstrated is viewed as a matter of chance. The illustration from daily life and physical events both exemplify that chance is the occurrence of events for which a specific ground or reason has not been exhibited.

An example of a physical event which is described as a matter of chance is the occurrence of heads or tails when a coin is tossed and allowed to fall on a flat surface. There are two possible events, and each has the same chance of occurrence. If we toss two coins the chance of two heads or two tails is not as great as the chance of one head and one tail. Thus there are degrees of chance. The degree of chance of an event is measured by its probability of occurrence. Hence on my interpretation chance is the occurrence of events in accordance with laws of probability.

In order to define the probability of an event I shall consider another physical event, the throwing of a die. Since the die has six faces there are six possible results of a throw. If the die is of uni-

¹ Contributed to a symposium on Chance and Cosmogony at a meeting of the Pacific Division of the American Philosophical Association, December 27, 1932, at Mills College, California.

² Compare P. Frank, *Das Kausalgesetz*, Chap. 6 (1932).

form density the probability of any given face becoming the top face is one-sixth; each of the possible events has the same probability of occurrence. The meaning of the preceding statement is defined as follows. Suppose that one throws the die N times, and that in n_i times the i th face appears. As N increases, the fraction n_i/N will fluctuate about the value one sixth for each face. Accordingly we say that there are six possible events, each of which has the probability one sixth. The probability for a single event is thus defined in terms of a statistical ratio. Let me recall that the empirical condition that all the possible events occur with equal probability is that the die be of uniform density.

We have now seen that the occurrence of chance events is described by a statistical law. Thus the ratio n_i/N fluctuates about a fixed value $P_i = \frac{1}{6}$. If a large number of trials (N) is made, the i th face will occur approximately n_i times, where $n_i = P_i N$. Chance events occur in accordance with a statistical regularity.

The statistical law, however, requires certain causal laws as a foundation. Thus for the chance event there is a set of possible results which is determined by definite laws. For example, the six possibilities in the throwing of a die depend upon the determinate fact that a die has six faces. Furthermore, the die is in stable equilibrium only when resting flat on a face. This is determined by the causal laws of mechanics. Thus the chance event, which is governed by a statistical law, occurs in a definite setting. We say, however, that it is a matter of chance which of the equally probable chance events will occur. We can define the probability of the chance event.

I remarked that the statistical law presupposes a background which is determined by causal laws. Now, as a matter of fact, the chance event upon more detailed analysis may be explained in terms of causal laws. Thus, although the outcome of throwing a die is described in terms of chance, in classical physics one would characterize the event as in fact causally determined. We are not able to specify the initial and accompanying conditions with sufficient completeness in order to exhibit the event as an occurrence determined by causal laws. Description in terms of probability is thereby to be viewed as an expression of ignorance.

Thus within the system of classical deterministic physics we may view all physical events as determined by causal laws. On account of our inability to apply these laws in detail we characterize some events as a matter of chance. The occurrence of such chance events is described in terms of statistical laws. From this point of view the concept of chance expresses absence of knowledge. The possibility is suggested, however, that the statistical laws regulate the occur-

rence of events which are not determined in detail. Chance would then be objective. The description of events in terms of objective or real chance, that is, in terms of statistical laws which one does not attempt to analyze further, has been realized in the new quantum theory.

II

The quantum theory represents the physical order as indeterminate. I propose to analyze this indeterminism and its philosophical presuppositions.

Physical description starts from the fact that the values of several physical quantities characterize a system. Thus a system may be characterized by the position of its elements at a given time, their momentum, energy, electric charge, temperature, etc. Physical laws are functional relations between physical quantities.

We may contrast deterministic and indeterministic physics.

Classical physics was deterministic. A system was characterized by definite, determinate physical quantities. Thus a particle was assumed to have a definite position at a definite time and also to have definite momentum and energy. To the physical object was attributed a definite, determinate structure. Furthermore, the course of physical processes was determined. Given the state of a system at a specified time, one could predict the state at some future time. In deterministic physics the present state determines the future state. Thus deterministic classical physics assumed determinateness in the momentary structure of physical reality and determinism of the future by the structure of the present.

Contemporary physics, as exemplified by the quantum theory, is indeterministic. In the first place indeterminateness in structure is ascribed to a physical system. Thus one distinguishes between complementary sets of quantities, space-time quantities and momentum and energy. The complementary quantities do not simultaneously characterize a system with complete determinateness. Determinateness in space and time is accompanied by indeterminateness in momentum and energy and vice versa. The reciprocal limitation of the complementary modes of determination is expressed by Heisenberg's principle of indeterminacy. Furthermore, since the present state is not completely determinate, one can not have a principle that the present determines the future.

The quantum theoretical indeterminism may be expressed in the following manner. Suppose that we have given a physical system. There will be associated with the system sets of possible values of the physical quantities which characterize it.³ Each possible value

³ Compare L. de Broglie, *Théorie de la Quantification dans la nouvelle Mécanique* (1932).

of a physical quantity is characterized by the probability that the system will be found to have that possible value. The probability functions satisfy determinate laws. The realization of a possibility, however, is a matter of chance, the degree of chance being expressed by the probability of occurrence of the specific possibility.

III

The foregoing exposition of indeterminacy presents a problem of interpretation. I initiate the discussion with the question, what knowledge of the physical world is expressed by physical science? As an example of a formula which expresses a typical physical law let us take $F = ma$, which expresses Newton's second law of motion. The expression of this equation in words is that the force acting on a body is equal to its mass times its acceleration. What do the symbols denote? There are two interpretations.

One view is that the symbols represent properties of things or processes in the physical world. Thus the symbol m for mass denotes a property of a body. We may hold that the symbol F for force denotes the strength of an activity, or we may abandon the concept of force as an activity and use only the concepts of mass and acceleration. In any case, the formula $F = ma$ expresses a relation between properties in the physical world. In the formula the conjunction of symbols m and a must not be interpreted as a multiplication of numbers, but as a multiplication of properties. In some physical equations the square of a symbol occurs. Thus the law of falling bodies is expressed by $s = \frac{1}{2} gt^2$. On the present interpretation of the symbols t^2 is not the square of a number, but the square of a property, whatever that may mean. If we suppose that our equations refer to properties, and not to numbers, we must recognize that the indicated operations are upon properties. The formal laws for the operations upon properties are the same as those for the operations upon numbers. The interpretation of symbols as denoting properties has been expounded especially by R. C. Tolman.

Now I admit that it is natural to interpret some formulae as directly expressing relations between properties. If we add a length to itself we obtain a length which is double the original length. The operation is expressed by $l + l = 2l$. It seems natural to interpret this formula as applying to the property length in the external world. I think, however, that the foregoing interpretation is unnatural for more complicated formulae in which we have symbols such as t^2 . Accordingly, I turn to the view that the symbols refer to numbers which express the results of measurement.

On this view, the symbol F denotes a number relative to a given

unit, similarly m and a denote numbers. The equation $F = ma$ states, it is possible to assign numbers F , m , a such that $F = ma$. Now if we assume that the numbers are assigned to properties, there must be a one-to-one correspondence between measure-numbers and properties, so that the operations on measures should parallel the operations on properties. The interpretation of addition is particularly simple. The formula $l + l = 2l$ may be interpreted naturally in terms of properties or in terms of numbers assigned to the properties.

Although I have contrasted the two interpretations we must recognize both points of view. An empirical analysis of the significance of physics reveals the following. Physical objects are assumed to have various properties such as length, mass, etc. Length, in particular, has an intuitive basis, for there is a sense in which we can see or feel a length. But we also assign numbers to properties in measurement. In the mathematical formulation of physical theory the number substitutes for the property.

If we assume that our equations express relations between numbers, the indeterminacy of the quantum theory can be attributed to the fact that measurement disturbs the state of the system so that the result can be predicted only with a specific probability. The measurement of one quantity disturbs the determinateness of a complementary quantity. Thus the indeterminacy is frankly recognized as pertaining to our measurements. But since the measurements constitute the data of physical theory we can not go behind this indeterminacy. Such an interpretation may be called operational or symbolic.

We may insist, however, that the measures stand for properties, that the property has an intrinsic nature which is other than the measure. We may further adopt the view that the property is constituted by the context which is provided in the process of measurement. It would then appear that the property shares the indeterminacy of the measure. We thereby extend the indeterminacy from the measure to the property. This extension is based upon the assumption that to every measure there corresponds a property, and that indeterminacy in the measure indicates indeterminacy in the property.

I pause a moment to consider the nature of the assumption. We may interpret it as an hypothesis or a postulate. I assume that an hypothesis is an assumption of which it is significant to say that it is true or false. Now our knowledge of physical reality is obtained primarily through measures. Thus the interpretation of our assumption as an hypothesis implies that there is some other means of gaining access to the property. In the case of length we have

intuitive knowledge, but such direct access to properties is for the most part absent. If we interpret our assumption as an hypothesis we must therefore, as Philipp Frank has pointed out, assume the existence of an omniscient intelligence to whom the hypothesis would be significant. I remark parenthetically that this type of argument was employed by Royce who inferred the existence of the Absolute from the possibility of error.

The other interpretation of the assumption is that it is a postulate which defines the property in terms of its correspondence to the measure. The property is constituted in the process of measurement. From a positivistic point of view such a property would seem to be superfluous.

IV

Now whether one emphasizes the property or measure there are further aspects of indeterminacy which must be analyzed.

The system upon which we act in performing a specific experiment is characterized by one or more sets of possible results—possible measures or possible properties. The outcome of the experiment is in general not determinate. In this sense the structure of physical reality has an element of indeterminateness; before measurement a physical property or its numerical representation consists in a set of possibilities. I now raise the question; what is the status of the possibilities while they are possibilities?

On one view the concept of possibility is to be chosen as fundamental. At best one may give an explanation such as the following: if one acts on the system in a prescribed manner any one of a set of results may be realized. It is certain that one of the set will be realized.

One may, however, seek a ground of possibility by some form of realism. In a neo-realistic theory of possibility the elementary possibilities may be assumed to be real entities. The realization of a possibility is merely the discovery of something real. The indeterminateness of physical reality is thereby explained as a multiple determinateness. In a dualistic theory of the possibilities of physical determination one seeks the ground of possibility in some entity behind phenomena. The realization of a possibility is the action of this entity upon the subject. Thus on the dualistic view one adopts the concept of a reality which transcends experience. There are then two modes of accounting for the indeterminateness in the results of measurement. We may ascribe an indeterminateness to the transcendent reality, or we may postulate a determinate reality which acts in an indeterminate manner upon the subject. Thus on dualistic assumptions one can retain the concept of determinate reality; indeterminacy becomes a ~~matter~~ of experience or knowledge.

The principle of indeterminacy then becomes a principle of uncertainty.

The conclusion of the discussion is that the interpretation of indeterminacy in quantum theory depends upon one's philosophical attitude. One can preserve determinism in the physical order if one accepts a dualistic theory of knowledge. This result is similar to the conclusion that one can preserve absolute space and time by a dualistic theory. I cite, for example, the views of A. O. Lovejoy and R. W. Sellars. I think, however, that for the most part the interpreters of the quantum theory accept indeterminateness as a fundamental characteristic of physical reality. Thus independently of the views that one holds concerning the nature or ground of the possibilities of physical experience one may accept the theory of indeterminism in the physical order.

V

Thus far I have emphasized the aspect of indeterminacy in physical reality. We must, however, recognize that there are elements of determinism left in indeterministic physics. We have seen that the result of a measurement is one of a set of possibilities. Now the set of possibilities is determined. The general formulation is that the nature of the system with respect to a certain property is expressed by the structure of an operator. The characteristic values of the operator are the possible results of a measurement of the property. This is determinism. Again, the average values of a physical quantity are determined. Now macroscopic or large-scale phenomena are the manifestation of the combined action of many elementary processes. Measured macroscopic quantities are determined by average values except for chance fluctuations. Thus macroscopic processes are subject to causal laws except for chance fluctuations. Since classical physics deals with large-scale processes it therefore finds a place in the new indeterministic physics. Again, the observation of elementary processes requires a macroscopic environment as a background or setting. The description of experimental conditions which furnish the basis for indeterministic physics thus presupposes classical deterministic physics to the first approximation.

VI

A contemporary paper on indeterminism is probably incomplete without an application to biology. And so while I emphatically disclaim responsibility for the following ideas, I think it will be of interest to sketch the attempted extension of fundamental physical ideas for the reconciliation of the issue between vitalism and mechanism.

We have seen that a fundamental concept of quantum physics is the concept of complementarity. For the description of atomic processes, for example, we have two mutually exclusive, but complementary sets of quantities, namely, space-time coördinates and momentum and energy. Determinateness in space and time involves indeterminateness in momentum and energy, and vice versa. The reciprocal limitation of the complementary quantities is expressed by the principle of indeterminacy.

Bohr, seconded by P. Jordan,⁴ has extended the concept of complementarity for the purpose of determining the relation between vitalistic and mechanical descriptions of organic phenomena. An organism may be described in terms of vitalistic concepts, but then the possibility of physico-chemical description is abandoned. Or the organism may be described as a mechanism which obeys the laws of the physical order. But the physical description of an organism implies that it has been observed and hence acted upon. The interference with the organism for the purpose of physical description damages its vital functions and in the limit of complete mechanical description results in the death of the organism. The gradual destruction of the vitality of the organism during the process of scientific investigation is correlated with a limitation of the subjective feeling of freedom of action. Vitalism and mechanism are thus viewed as mutually exclusive, but complementary, modes of description of organic phenomena. Just as the determination of the position of an electron disturbs its momentum, so does the observation of the mechanism of the organism destroy its vitality. In a reciprocal manner, the representation of an organic process as vital requires the abandonment of mechanical description.

V. F. LENZEN.

UNIVERSITY OF CALIFORNIA.

THE METAPHYSICAL AND THE LOGICAL INDIVIDUAL¹

IT is almost a slogan today in philosophy that there are no material certain propositions. But to me it is indubitable that the proposition "Some day in some place I shall meet myself coming toward me" is an absurd material proposition and its denial material and certain. So much for the quest for uncertainty. I know I am a unique, unrepeatable individual and that there is no sense in the supposition of myself being duplicated. If there be a choice between a dialectic which results in the rejection of the claim which

⁴ *Die Naturwissenschaften*, Nov. 4, 1932.

¹ Read before the December, 1932, meeting of the Eastern Division of the American Philosophical Association, Bryn Mawr.

I make to individuality, and the blunt statement that I, a unique being, do exist, I shall certainly choose the latter. I don't know myself completely, but I am as certain as I am of anything that I am something whose being is not to be found in any collection of sharable properties.

But the arguments which deny the existence of individuals must be met. Three, at least, are basic and fairly common. The first denies that there can be any individuals, because individuals must be either complex or simple—capable of division or not. But if they were complex, they would have an intelligible character, and would then no longer be pure individuals. The complex can be divided and the divided consists of distinct parts united by an intelligible form or relation. As such a form is general and is essential to the complex, the complex must be constituted by and not, as an individual, be something set over against a general character. If, on the contrary, individuals were simples, they could not exist. To exist is to have a temporal spread. A temporal spread involves connection between a past and a future and thus implies complexity. An existent, simple individual would, then, self-contradictorily, be complex.

The second argument holds that if there were individuals, as distinct from general characters, it is conceivable that any number of individuals might have the same characters in common and differ from one another only in that they were different individuals. But these different individuals would nevertheless have in common the character of being unique, so that individuals which had every character in common except their uniqueness, would self-contradictorily have also their uniqueness in common.

The third argument is to the effect that the individual can not be known because all knowledge is in terms of generals. No knowledge has an individual as its content, but only refers to it. And that which can never be directly known under any conceivable circumstances can not significantly be said to exist.

These arguments seem to show that the individual is at once incapable of complexity, existence, uniqueness, and comprehension. They seem to leave us with the unpleasant dilemma of rejecting the existence of individuals (and thus the certainty that we exist and are individuals), or of being content with the irrational and unknowable. The strength of these arguments, however, consists mainly in the fact that they are based on ambiguities due to the failure to make proper distinctions.

It is quite common to reply to these arguments with an opposing set, of which the following are typical. Firstly, it is asserted that there are individuals, because whatever is complex can always

be divided into more basic elements, and the individual is that ultimate indivisible presupposed as the unit out of which the complex is constructed. A second argument urges that there must be individuals because entities sharing the same traits are distinguishable and there must be something besides general characters to make the distinction possible. A third argument maintains that there must be individuals, for otherwise the objects of imagination could not be differentiated from those *in re*. Individuality is here taken to be the element of obdurateness in fact which differentiates fact from fancy. These arguments defend the existence of individuals on the ground that without them there would be nothing simple or complex, no numerical differences and no distinction between fact and fiction; but they are based on an incorrect analysis of the individual, as can be seen from the following criticism of the first set of arguments.

The first argument, to the effect that there could be no individuals because simples can not exist and complexities are not individuals, fails to differentiate between logical and metaphysical individuals. A logical individual is an argument to a propositional function, such as "... is red." A metaphysical individual² is the indivisible, existential unity from which both logical individuals and their characterizing predicates are derived by abstraction. The argument effectively shows only that logical individuals, being simples, can not exist. It does not, however, deal with the metaphysical individual which is actually neither simple nor complex, but potentially both simple and complex. The metaphysical individual is complex in the sense that from it a multiplicity of distinguishable predicates can be abstracted. In a similar sense it is simple, for it yields the logical individual as an abstraction. This logical individual is simple, unanalyzable, and non-existent. Both it and the predicates are derivatives from the metaphysical individual because the metaphysical individual is a what imbued with existence, a that suffused with intelligibility, characters before they are shorn of their existence; existence before it has been sundered from that which exists; the source of the complex and of the simple. It is, in short, a pair of correlative abstractions before they are abstracted, and thus before they are correlative or a pair.

² The term "metaphysical individual" is here used in contrast to "logical individual." Professor John Dewey, by a well-turned question, has made me see that there are speculatively distinguishable aspects of the real, here called the metaphysical, individual. Three of these aspects, I think, are fairly obvious. There is the felt individual, as given; the ontological individual as private; and the metaphysical individual proper, the unity and source of the other two. The arguments of this paper are framed sometimes in terms of one and sometimes in terms of another of these aspects without, I think, in any way effecting the strength of the thesis.

The second argument, which denies that there are individuals because all individuals share the character of uniqueness, refers to both metaphysical and logical individuals. It supposes falsely that the uniqueness of the individual is due to the possession of the character "uniqueness." But the individual is not the product of characters, one of which is "uniqueness." The individual is a private being, and privacy is essentially unsharable and uncontemplatable. It can be reacted to or lived through—it can not be possessed in contemplation. We can not ask how individuals come to be, for such a question not only supposes individuals to be derivative rather than foundational, but the very form of the question denies the possibility of an answer. We can answer the question "what makes an individual" only by offering some general character, and that general character would be something sharable and therefore insufficient to determine an individual. To ask for a principle of individuation is to suppose that characters have an independent being apart from the individual and that some other element must be added to these characters enabling them to participate in or to constitute the individual, whereas all characters are abstractions from the already existing individuals. There is no more justification in the quest for a principle of individuation than there is in the quest for the principle of being, or any other fundamental non-derivative categorical aspect of the universe.

The final argument denied that there were individuals, because individuals can not be possessed in knowledge. This argument falsely assumes that knowledge consists in the contemplation of characters. In this sense of knowledge, it is true that individuals can not be known. Only characters can be contemplated, and these only when abstracted. The concrete metaphysical individual must be lived through or felt. We can know that there are such entities by noting that there must be a common locus for both logical individuals and characters and this locus can be neither a logical individual nor a character. And there must be such a locus if a singular proposition (whose subject is a logical individual and whose predicate is an abstract universal) is to have a definite meaning and a single reference. We can differentiate individuals by noting the different acts of indication necessary to specify the logical individuals abstracted from them. We can know the nature of any given metaphysical individual by studying the characters abstracted from it. And we can understand the difference between the metaphysical individual and any object of indication and of contemplation by noting the difference between the state of being contemplatable without being contemplated, of being indicatable without being indicated. The metaphysical individual transcends knowl-

edge only in the sense of having being apart from knowledge. It does not transcend it in the sense of being beyond knowledge, for all its characters can be contemplated, and what remains after the abstraction of the contemplated can always be indicated. Our knowledge has abstractions, not metaphysical individuals as its content; but it can be about such individuals so long as the abstractions from them are recognized to be abstractions. This recognition is involved in the assertion that characters are predicates of the existing, and that the existing is intelligible, while every character as known is without existence, and every logical individual, as indicated, is devoid of characters. And we can make this assertion and do make it whenever we insist on the fact that what we know is always less than or not identical with what is.

We can now see that the traditional defense of the existence of individuals is based on misconceptions. The first argument defended the existence of individuals on the ground that they were the ultimate constituents of the complex. The metaphysical individual, however, is not a constituent of but a source of the complex, just as it is not that which is simple, but the source of it. If individuals were the ultimate constituents of the complex, the very being of complexity would be a miracle, for in order to obtain such complexity it would be necessary to relate the individuals to one another. But this could not be done until the relation had first been related to the individuals and so on without end. The second argument defended the existence of individuals on the ground that they made discriminations possible. Such an argument falsely supposes that metaphysical individuals are contemplatable, for if they make discrimination possible they must be in knowledge with or before the discriminated. But if the individual were contemplable, how could the contemplated be referred to it? We discriminate in terms of logical individuals, and metaphysical individuals make discriminations possible only in the sense that logical individuals are derived from them. The third argument defends the existence of individuals on the ground that they are the obdurate elements in the world. Obduracy is not a character of the metaphysical individuals but of logical individuals, because logical individuals are brute abstractions, not amenable to thought; it is also a character of predicates because each predicate is eternally what it is. The metaphysical individual is obdurate in the sense that these obdurate entities are definitely and really derived from it, and as the occasion for the feeling of force experienced in our knowledge of characters. It is the source of inescapable elements and not the inescapability of the elements themselves. If it were the inescapability of the elements, it would be an abstraction from them, some-

thing rarefied and non-existent, sharable and predicable, rather than that which is the most concretely real, to which all subjects and predicates must be referred as locus.

The metaphysical individual, in short, is concrete privacy, the referent of all singular propositions, the source of all our knowledge, neither compacted out of universals, nor a limit approachable by multiplying abstractions. It can never be possessed for its very being consists in its externality to everything else. Yet it can be intruded upon, and is intruded upon whenever it is forced to experience, for the content of experience—feelings, and abstractions—are the products of a violated privacy, forced to recognize the existence of other individuals. How this is possible is the problem of the internalization of that which is essentially external—another, but profounder question, to which perhaps we shall have occasion to refer again.

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MATERIAL TRUTH IN RATIONAL THINKING

THIS paper proposes the thesis that all rational activity is of the type of mathematical reasoning; that the truth of any proposition is identical with mathematical or formal truth, and that when, in the inductive sciences, we approximate to truth, we approximate to formal truth; that, finally, if "truth" as apart from validity has any significance whatsoever, that significance is to be apprehended by mystical intuition alone. The aim of man's rational activities is to discover consistent sets of propositions. He speaks of truth, but thinks of consistency. He sets truth upon a pedestal; then conveniently, and of necessity, ignores it, for its introduction into rational thinking is gratuitous. It must not be inferred from these words, however, that the consistency theory of truth is here to be promulgated. No attempt will be made to identify truth with consistency. No such monstrous assumption finds its way into this paper.

The distinction between "formal" and "material" truth is well known. A proposition is formally true if it has been validly deduced from given premises. Material truth can not be defined so easily. I do not know the *meaning* of the word. I *feel* that it refers to some "actual" state of affairs transcending conceptual systems; that "real" world of which the mystic, through direct intuition, is aware—direct intuition breaking through the walls of conceptual systems within which the rational thinker is a life-long prisoner. Consequently the mystic claims that his intuitive knowledge can not be

described or otherwise expressed in words; that he who wishes to know truth must be his own teacher, must be *one* with reality. Of the Tao, say certain mystics, nothing true can be said, and all that is said is false. Material truth enjoys the privacy of the Tao. It is the truth to which we *refer* when we say "It is true that this book is red," or when we assert the truth of a scientific or philosophical proposition. Yet it is not the truth which we *discover* when we verify these propositions, nor, do I believe, can this truth ever be discovered except through mystical experiences. Hence those of us deprived of the abilities of the mystic can never discover material truth. We who are limited to the tools of reason: concepts, logic, experimentation, must satisfy ourselves with formal truth, while those, furthermore, who are sceptical of the mystic must, *a fortiori*, doubt the very existence of material truth. If the following discussion commands assent, truth, as a valuable concept in rational activity, as an attainable goal, must be relegated to the limbo of noble fictions.

II

There are a number of intellectual activities in which truth seems to play a fundamental rôle. Three of these shall be considered here: science, philosophy, and every-day experience. The stand which this paper takes is that all intellectual activity, whether it is as advanced and refined as physics or philosophy, descriptive and immature as certain sections of biology, or naïve and often unattended to as in every-day experience, is theoretically similar in logical structure to systematic mathematical reasoning. It, whether consciously or not, always lays down certain assumptions, postulates, or *a priori* principles, in terms of given, and therefore undefined, concepts. From these principles it deduces subsidiary propositions. The chief rôle of experience or experimentation is to call forth the proper conceptual system and to serve as a determinator and regulator of assumptions. The propositions, judgments, or conclusions of intellectual activity derive their truth from their formal relations to the body of propositions constituting the system of which they are a part. In what follows we shall try to establish this view, first describing a pure mathematical system.

A mathematical system in strict logical form is one based on a number of undefined concepts, some of which are classes of entities, others relations. In terms of these, a number of postulates or assumptions are made, their assumptive character being that they are "true." Truth, in this context, does not mean that the postulates state facts or that they are representative of reality; it merely means that they are arbitrarily chosen propositions descriptive of certain relations holding among the undefined elements. The

logical analysis of the meaning of truth when applied to an assumption is the following. Every proposition serves as an argument to a certain logical function $F(p)$ called, deceptively, a truth-function. The number of values assignable to a truth-function differs in different systems. Ordinarily there are two, although n -valued systems, where n is greater than 2, have been developed. From among the class of truth-values one (let it be symbolized by the figure 1) is chosen as determining the laws of the system. Thus any proposition p such that $F(p) = 1$ is a law of the system. A postulate is "true" because the assumption is made prior to the development of the system, that the value of the truth-function to which it is an argument is that chosen law-determining truth-value. Clearly this is far removed from what is commonly called truth. An extensive discussion of truth-values is found in Lewis and Langford: *Symbolic Logic*.

From these postulates other propositions are deduced, which are the theorems of the system; and from the undefined concepts new ones are constructed, which are defined in terms of the former. Thus the entire system is based on the undefined concepts and the postulates; the structure and the truth of the theorems are determined by the set of assumptions. A proposition is a theorem of the system if it is validly deducible from the set. It is then true, formally. The claim is made here that this is the only truth which we can ever know in rational activity, for all rational activity consists in thinking in terms of such systems.

The remark may be here interpolated that two systems with different structures are equivalent when, for every proposition of the one there is a correlative in the other. The two systems may be equivalent although the fundamental terms of each are derivative terms of the other. Thus there is no one set of elements which is ultimately simple or fundamental, or any one set of assumptions which claims absolute priority. As this meaning of equivalence is not limited to mathematical systems, but is generally applicable, the question is not being begged by pointing out that there might be two or more metaphysical systems employing different assumptions and different fundamental entities, which nevertheless are equivalent. None of them, then, would describe the "real" nature of the universe, but only the nature of the universe with respect to arbitrarily chosen bases. Stone walls may not a prison make, but logical forms most certainly do—unless there is nothing outside of the systems.

Every intellectual activity demands the creation of a system because of the *a priori* structure necessary to it. Surely it is needless to argue that the intellect, prior to applying itself to a problem,

must make assumptions or hypotheses, and must accept the meanings of some words as known. Since, moreover, the mind casts aside any contemplated propositions inconsistent with these assumptions or with propositions deduced from them, we have here the essential ingredients of a system. It is true that in inductive thinking some propositions claim our assent with such tenacity that if they are inconsistent with the assumptions, it is the latter that are discarded. But these two cases are not disparate. We shall return to the latter later.

A principle immediately apparent in a study of logic is that a proposition is "true" only within a system. A proposition derives its truth, and the concepts of which it is composed gain their very meaning, from the system in which it is found; or if it is not part of an explicit system, then from its universe of discourse. "A straight line is the shortest distance between two points" is true of Euclidean space, i.e., within a system defining Euclidean geometry, but may be false of certain non-Euclidean spaces. The very meaning of "straight," "line," "short," and "point" is a function of the system. The same holds true of propositions not in developed systems. "Asclepius raised the dead" is true of mythology; false in history. Clearly, the truth here referred to is *formal* truth. A statement torn from its context is neither true nor false, nor has it meaning.

Is it possible, then, to find material truth by means of philosophy or science; i.e., can one learn about the real world through these, or is one always limited to knowing the formal truth relative to a system? This paper is not advancing the old notion that by means of intellectual endeavor one can gain only an approximation to the whole truth. Quite to the contrary, we do, or at least can, discover formal truth, but we do not know that we even approximate material truth. In speaking of material truth, I do not assume that there is such a thing. That question does not concern us here. If formal and material truth ever coincide, we could not know it by reason alone. Nor do I believe that we really care. Man in his every-day activities is certainly a pragmatist, while I believe that the scientist or philosopher is trying merely to find consistent systems. And if he claims that consistency is a sufficient condition of material truth, then he is making an extraordinary assumption indeed.

It is desirable to investigate this further by considering a typical philosophical problem. Unfortunately for knowledge in general and the purposes of this paper in particular, there are no rigorous neatly delineated systems in either philosophy or science. Even so-called "systems of philosophy" are but loosely termed such. Although these fields of intellectual endeavor can boast of much close and

careful reasoning, their assumptions are generally implicit and hidden among deductions, while their concepts often lack precise definition. This is not due to any inapplicability of postulational method to their subject-matter, but rather to our ignorance of the subject and its oft-times immense complexity. Theoretically there is nothing impossible in systematizing either a philosophy or even a developing experimental science. Wherever there is rational thinking there are the rudiments of a system, as the term is used here.

Let us consider in their simplest form two theories developed for the explanation of animal behavior. Let the hypothesis of the one be that there exists an anima which controls the physico-chemical bodily machine, and let the other be its contradictory which denies the existence of an anima, but assumes a machine so intricate and delicate that all behavior can be explained in terms of it alone. Both theories can not be "true," for they are contradictories in that one says "Animal behavior can be completely explained in terms of physics and chemistry," while the other maintains that it can not. A careful systematization of each theory might show that one or both need considerable revision. There is also the remote possibility, which would be discovered through logical analysis, that the two systems are equivalent because the contradiction may be merely apparent, and derived from lack of rigor in definitions and reasoning. However, let it be assumed that they are contradictories. If this example should prove to be inadequate, some other would not.

Let us suppose, therefore, that we have two internally consistent but mutually contradictory theories. It being impossible to accept both, which shall be chosen to explain animal behavior? It will be noted that the primary criterion is consistency. A system known to be inconsistent can not claim our assent. But as, by hypothesis, both of these systems are consistent, we are forced to choose another criterion. We now investigate which of the theories is the more adequate, that is, which of the two is more complete in its explanation of experiences. The one which is more complete is preferable. But adequacy is a decidedly uncertain test. The number of possible experiences is so vast—perhaps infinite—that it would be impossible to check the two systems completely in this fashion. In applying the criterion of adequacy a customary device of the empirical sciences is employed; one moves from asserting the consequent (experiences) to the antecedent (the respective hypotheses or assumptions). A theory can be verified only by inspecting its consequences, and comparing these with experience. Thus this criterion gives probability judgments only. The system which seems to be the more adequate has the higher probability of being true.

Thus adequacy is a formal mathematical criterion, and not a

pragmatic method of choice. If no experience is discovered which contradicts an hypothesis, that hypothesis has a certain probability of being true. Of two hypotheses, the one which is consistent with the more experiences has the higher probability. A negative experience immediately destroys the hypothesis, while the more affirmative experiences there are discovered which strengthen the hypothesis, the greater is the probability that unexamined experiences will be consistent with it. It follows from this that adequacy is a purely formal matter, and hence *the truth to which the inductive methods approximate is strictly formal truth*. The two hypotheses in our example are, respectively, an anima and an autonomous physico-chemical machine.

Suppose, further, that the two theories are equally adequate. Either the simpler must be chosen, or an impasse admitted. The history of philosophy shows that when a situation such as this one arises, philosophers will recast their ideas in such a manner that the necessity of assuming either anima or machine is removed. The controversy of mechanism and vitalism is itself a product of more general philosophical assumptions and concepts. Since a certain set of assumptions leads to contradictory conclusions, it follows that the set is untenable. It is discarded in favor of a new set, generally involving new concepts, from which the contradiction does not follow. In the Whiteheadian philosophy, for instance, there is no such problem as the one of mechanism and vitalism. This is not because it has been neglected, but because prior assumptions and concepts are such that it can not arise. The problem has not been solved; it has been annihilated. Yet if philosophy attempted to discover truths about reality, this could not be done. If the entities philosophers use to explain reality were real in themselves, they could not be created and annihilated as they continually are. Philosophy seems to be but a set of systems, its problems and its entities being functions of these systems. An adequate philosophy can not ignore experience, but it can circumvent the assertion of judgments of reality.

Russell uses the expression "ultimate constituents" of the world. He says, for instance, in *Analysis of Mind* (p. 124), that there are such things as we see no means of analyzing. As a matter of fact, they are unanalyzable because they are the primitive elements of his system. The ultimate constituents of one philosophy are the derived ones of another. He writes (*loc. cit.*), "In Lecture V we found reason to think that the ultimate constituents of the world do not have the characteristics of either mind or matter as ordinarily understood." This is so because he has accepted something else as logically primitive, and builds up the concepts of mind and

matter from this. In some philosophies, mind is the ultimate constituent in terms of which matter, events, aspects, universals, etc., must be defined and explained. Or if matter is taken as primitive, these other concepts are constructs of it. The choice of the system's basic terms determines the ontological status of the derived constituents. But that status is relative to the system. Thus in one system, matter and mind are but logical abstractions defined in terms of eternal objects and events; in another both are real and equally primitive; in a third matter alone is real, and mind an epiphenomenon; in a fourth, all reality is described in terms of mind. "Reality" is what the philosopher chooses to make it. Some of these systems may be equivalent, but, if so, then in the logical sense explained earlier. And what of material or transcendent truth? It has been forgotten.

I believe that we are forced to admit that *rationally* there is no set of absolutely ultimate constituents. We know that there is no one set of absolutely primitive geometrical objects. So likewise in philosophy. Eternal objects, sensible particulars, mind, matter, or combinations of these may each be chosen as ultimate. With sufficient ingenuity a system can be developed from any of these. Adequacy and simplicity are probably the only criteria with which one chooses a particular system.

"An anima exists" is a true proposition in one system; false in another; meaningless in a third. The failure to recognize the importance of the system has led to the vast amount of pointless philosophical criticism that exists. Arguments, criticisms, and discussions, to be relevant, must take cognizance of assumptions and definitions. Many of these are futile because disputants fail to make use of the same definitions. Critics often attack theories by lifting them out of their systems (generally implicit) and showing that they fail to hold with respect to other (implicit) assumptions. No example is more pertinent than the criticisms of proofs of the existence of God. There is no difficulty in developing such a proof; it is merely a question of finding the proper premises. And if the deduction is valid, He does exist—in that system. It is then true, but formally only as far as can be known by reason, that God exists. This explains why the gods of Plato, Aristotle, Descartes, Spinoza, etc., not only differ among each other, but also fail as satisfactory objects of worship. The gods of philosophies are metaphysical principles; the god of worship is an object of faith or of mystical insight transcending systems.

The only subjects of critical discussion are adequacy of system and validity of deduction. While assumptions and definitions are not subject of attack with respect to their "truth," they may be

attacked as to their pragmatic values. It is thoroughly unjustifiable to attack conclusions without regard to premises. If each writer were to state explicitly his universe of discourse, his postulates, and his definitions, most disagreements would disappear. This also applies to arguments concerning practical affairs, as we shall see.

What has been said so far applies equally well to scientific investigations. It is unnecessary here to argue that every scientific study must presuppose certain principles according to which the investigation is carried on. The scientist, like the philosopher, builds systems. When he, in his inductive studies, approximates the truth, he approximates formal truth; i.e., he increases the probability that a certain proposition is true of or consistent with a system. The "real" world is a function of the system. As a scientist he does not know of any other real world. His criteria are consistency, adequacy, and simplicity. The structure of propositions he is developing is not questioned until he discovers an internal inconsistency or an experience not explainable by it. If an experience is found which is inconsistent with his structure, the latter is recast. Consistency and adequacy are his chief judges. Like the philosopher, the scientist creates and annihilates entities. Within a system such an entity is real, but it is merely a function of that system; it is an hypothetical entity created to explain certain experiences with respect to certain assumptions. If the assumptions are discarded, so also are generally the entities associated with them. The ether is such an entity. Einsteinian relativity has not *disproven* the existence of the ether; it has *assumed* that there is no ether in the sense that it is a fixed framework.

III

The entire preceding discussion has consistently refused to consider a point which might have destroyed its main thesis. Is material or formal truth the truth asserted of the judgments of experience? Most rational thinking deals with the results of experience, and hence we must turn to it. Many contemporary philosophers believe that the systematic principles underlying technical thinking function likewise in lay thought. The essential characteristics of systems are also present in the cognition of ordinary experiences and sense perception in general. Reference is here made not to the act of sensing, but to judgments of experience. Lewis, in his *Mind and the World Order*, has argued this point of view so cogently that much need not be said here. As a matter of fact, this paper could be considered a further deduction of his point of view.

The analyzed meaning of a concept (rather than its dictionary

definition) is a set of propositions related by implication; it is a system. The various Euclidean geometries may be considered to be analyses of the concept "Euclidean space." Huntington's articles on "betweenness" are exhaustive analyses of the meaning of that triadic relation.

A concept entails properties which constitute its meaning. This can be expressed by a number of "if . . . then" propositions relating the concept to its properties by the implicational relation. Such an analysis of mathematical concepts is familiar, but non-mathematical ones can also be defined thusly. "If this stuff is sodium, then it is chemically irreducible"; "If this is sodium, then its crystalline form is tetragonal"; "If this is sodium, then its specific gravity with respect to water is 0.971"; "If this is sodium, then its melting point is 97° C."; etc., etc. This analysis has not stated that sodium exists. It is an analysis of a pure *a priori* concept. Such can be made at will. I can define a chemical which does not exist, or which can not exist because it entails incompatible characteristics.

If to the statements describing the pure concepts is added an existential proposition, it is transformed into an empirical concept, while the implicational propositions become predictions of possible experience. Error of judgment may creep in during the application of this set of propositions to experience, while verification consists in discovering whether the predictions are fulfilled. The situation here is precisely the same as that already described of inductive reasoning. The proposition "This is a book" is true if the predictions entailed in the book-concept are fulfilled. If this thing looks like what the pure concept of book requires, feels like a book, it probably is a book. If it is opened, and we find a hollow interior for cigars, then a prediction has failed; an inconsistency has been discovered; it is not a book. Again where we have looked for material truth, we have found consistency. The perfect liar is a contradiction in terms. If a perfect liar is one who is so consistent in his lying that he is ever guiltless of asserting contradictions, then he is, *a fortiori*, a perfect truth-teller. Thus by the principle of the identity of indiscernibles, Satan and God are one.

The scientist using his senses in experimentation and the layman pursuing his search for the acquisition of bread and butter rely on formal systems as much as does the logician at his desk. We, as laymen, are notoriously pragmatic, in the sense that we are satisfied with consistency and adequacy. In the ordinary activities of living all we desire is that our experiences shall coincide with what we expect them to be. This means that our experiences shall be subsumed under our *a priori* concepts, and we accept that sub-

sumption to be correct when our "expectations," to use Russell's word, of the future are verified. We do not care whether the automobilist "really" sees green or red, but whether he will consistently see the same colors, and drive accordingly.

But it is not the intention of this paper merely to argue that we don't care about material truth. The attempt has been made to show that without transcendent insight we can only discover or approximate the discovery of formal truth in science, in philosophy, and in life. We have tried to show that all rational thinking is within systems. Perhaps there is no real world beyond our systems. Our systems may constitute real worlds. This question falls outside of the scope of this paper. If this is so, formal and material truth coincide; if not, the mystic has his advantage.

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BOOK REVIEWS

Symbolic Logic. C. I. LEWIS AND C. H. LANGFORD. The Century Philosophy Series. New York: The Century Co. 1932. Pp. xi + 506.

The publication of this new *Survey* is an event of first rate importance, for it is the work of two mature minds and it expresses living thought. Where the tradition of science has left behind results of some finality the exposition is sometimes brilliant and always masterful and where matters are in doubt the criticism is free and always searching. One has the pleasure of watching two minds at work, oftentimes as if one were reading "logical confessions" expressed as freshly as in Russell's *Principles*. All this is of the greatest value in a "text," for only by watching minds at work does a beginner come to understand how work is done. Such books are rare. Commonly an author conceals his weaknesses, erases his false starts, and puts down only what he thinks is sound. How much inspiration and how much wisdom must Gauss have buried in his waste-paper basket! Like any technical work this book defies summary, but it will still be possible to touch on certain critical points.

In his *Survey* (University of California, 1918, p. 291) Professor Lewis says: "The systems discussed in the last chapter were all based on material implication, $p \subset q$ meaning exactly 'the statement p is true and q is false is a false statement.' We have already called attention to the fact that this is not the usual meaning of 'implies.' Its divergence from the 'implies' of ordinary inference is exhibited in such theorems as 'A false proposition implies any proposition' and 'A true proposition is implied by any proposition.'" This is

one of the characters that distinguishes material implication from strict implication.

Again in *Symbolic Logic* the point is frequently repeated: "By contrast [with material implication] $p \supset q$. . . is not determined to be either true or false in the other three cases [p true, q true; p false, q true; p false, q false]; whether it holds or not depends upon something else than merely the truth or falsity of p and q (p. 200)." Whether it holds or not! This is dangerous ground and it is hard to see why the system should be compromised by introducing it. The intent is clearly to make inference depend on "form," but formal distinctions are constantly lost in special cases or in the process of what Schroeder calls "specialization." No, on this point the *Principia* is as sound as a nut. It has borrowed to its profit from sound tradition. If this is not what ordinary inference means, it is what inference must come to mean if it is to be general. Our author has not here discovered the Achilles' heel of *Principia* which lies precisely in the fallacious conversion of

$$p \supset q \cdot \therefore \sim p \vee q.$$

It is to be noticed that the system of "strict" implication developed in the *Survey* is very different from that now presented under the same name in *Symbolic Logic*. In the *Survey* we read (p. 293):

$$1.02 \quad p \supset q = \sim(p \sim q),$$

$$1.04 \quad p \vee q = \sim(\sim p \sim q).$$

If these are generally true we may substitute in the first $q = \text{zero}$ and in the second $p = \sim p$, $q = \text{zero}$, which would yield,

$$p \supset 0 = \sim p,$$

$$\sim p = \sim p \quad (\text{by 2.51, p. 297}),$$

if zero is the modulus of addition.

This however wipes out the essential distinction, that is, if we press the matter further,

$$p \supset q = p \supset q,$$

$$p \vee q = p + q, \text{ etc.,}$$

and the system is no longer distinguishable from that of material implication.

In *Symbolic Logic*, however, Professor Lewis takes the essential step to rectify his system. He writes (pp. 141-142): "The definition of material implication has the force of the following pair:

$$(1) \quad p \supset q \cdot \therefore \sim(p \sim q),$$

$$(2) \quad \sim(p \sim q) \cdot \therefore p \supset q.$$

The analogue of (1) for strict implication holds: it is,

$$p \supset q \cdot \supset \cdot \sim(p \sim q).$$

... But the analogue of (2) which would be

$$\sim(p \sim q) \cdot \supset \cdot p \supset q$$

is false. It can be proved that it is not deducible from our postulates."

The equality of the *Survey*,

$$p \supset q = \sim p \vee q,$$

is thus *correctly* abandoned as fallacious and the reviewer can only feel gratified that this character of implication has at last been recognized by some one other than himself. For the last ten years he has repeatedly called attention to it (see, for example, his *Symbolic Logic*, pp. 17-18, 34, 131-132).

The next step in the development of the system of inference (which Professor Lewis does not take, and may, indeed, not be willing to take) is to introduce a fundamental expansion formula which enables us to express the product of any number of variables implying zero in terms of a sum of products of functions of the single variables. This formula, which we hope we express correctly in Professor Lewis's symbolism, would read:

$$\diamond(pq) = pq \vee (\sim p \sim q) \cdot \diamond p \cdot \diamond q \vee \diamond p \cdot \sim \diamond(\sim q) \vee \diamond q \cdot \sim \diamond(\sim p),$$

from which follows by the ordinary laws of the calculus the theorem,

$$\sim \diamond(pq) = \sim \diamond p \vee \sim \diamond q \vee \sim qp \diamond(\sim p) \vee \sim pq \diamond(\sim q),$$

and the formulas for the expansion of functions of higher order and degree can now be progressively developed.

The importance of these formulas lies in the fact that they reduce the solution of the most general problem of logic to the solution of a comparatively simple case. These matters once carried out, implication loses all its adjectives and becomes not "strict" but implication simply.

However, the theory of implication as Professor Lewis and his collaborators are working it out, is on most points far from settled in their own minds (cf. the extraordinary proposal C 13., along with a number of false postulates by Becner, p. 497). For example, in the second Appendix there appears, on the authority of Dr. Wajsberg and Dr. Parry, the theorem,

$$p \supset q \cdot \supset : q \supset r \cdot \supset \cdot p \supset r,$$

which is said to result from the revised *Survey* postulates (this

JOURNAL, Vol. XVII (1920), pp. 300-302), and Professor Lewis observes: "I doubt whether this proposition should be regarded as a valid principle of deduction," etc.

Now if Professor Lewis and his collaborators will express this in terms of their modal function, then by a repeated application of the expansion formulas given above all doubts will be removed. The work is somewhat long, but the result can be depended upon, if my formulas are correctly expressed in the author's symbolism.

One matter which caused the reviewer no little surprise was the treatment of traditional logic as contained in the chapter on the logic of terms. This criticism which begins with Leibnitz and extends to our own day has never been more admirably put, but one would not have expected the chapter to close without its having met its answer.

The whole fallacy of this criticism consists in the assumption that the "all, is" relation of traditional logic must be identified with the relation of Boolean inclusion, whereas it is actually to be represented as a rather complicated function of that relation. The device of extending the meaning of a relation symbol to overcome some obstacle of interpretation is a very common mathematical procedure and could be illustrated in many ways. Following long established method, then, we extend the meaning of the "all, is" relation and we write not

$$\text{all } a \text{ is } b = a \supset b,$$

which would be an oversimplification of the actual state of affairs, but

$$\text{all } a \text{ is } b = (a \supset b) \cdot \{(b \supset a) + -(a \supset -b) \cdot -(-b \supset a)\}.$$

On this interpretation, which coincides with the other for all "empirical" meanings of a and b and differs only in the limiting cases, all the postulates of Aristotle's logic hold true in a perfectly general sense, that is, without any restriction whatever as to what the terms may mean. To get "no a is b " we have simply to change b into $-b$ in the formula and it is then easy to see that the product of A and E vanishes for all meanings of the terms, so that subalternation holds true unexceptionally.

All the "valid" moods of the syllogism hold. For example, to prove the syllogism EAO in the third figure (fallaciously stated on p. 50 to be fallacious) we simply multiply together,

$$E(ba) = (b \supset -a) \cdot \{(-a \supset b) + -(b \supset a) \cdot -(a \supset b)\},$$

$$A(bc) = (b \supset c) \cdot \{(c \supset b) + -(b \supset -c) \cdot -(-c \supset b)\},$$

$$A(ca) = (c \supset a) \cdot \{(a \supset c) + -(c \supset -a) \cdot -(-a \supset c)\},$$

and observe that the terms in the product vanish identically.

Nothing could be more masterful than Professor Langford's exposition of the logical paradoxes and his manner of classifying them. For the reviewer a great many of these turn on the familiar case of the confusion of the use of "all" in the collective and in the distributive sense. In order to control the meaning of "This proposition is false," for example, we must define the parts that enter into the assertion. If we write: $f(p) = p$ is false and $\phi(p)$ is the form of the assertion about p , ϕ standing for what the authors would call some modal function of p , then we define "is false" as any f which satisfies $f(f) = \phi(f)$ and we define "this proposition" as the roots of the equation,

$$\{f \supset f(f)\}' \cdot \{f(f) \supset f\}' = 0.$$

This makes "this proposition" a two-valued function, ambiguously zero or one, so that $p = f(p)$ for the two values taken collectively, but not for the two values taken distributively.

We began by saying that the new logic is a work of first-rate importance and we should like to end on the same note. One can be thankful for an undertaking that is ripe and thorough even when one does not "go along" with every argument that turns on a critical point.

HENRY BRADFORD SMITH.

UNIVERSITY OF PENNSYLVANIA.

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NOTES AND NEWS

TO THE EDITORS OF THE JOURNAL OF PHILOSOPHY:

Mr. S. P. Lamprecht, in No. 5, Volume XXX of your JOURNAL, has commended my recent book on Hume far beyond its merits, and, as a matter of course, has shown on every page how thoroughly he has studied Hume and Hume's period. My vanity, therefore, together with my great respect for Mr. Lamprecht's attainments make me very reluctant to point out, what in view of the importance of the matter—so far as these things *are* important—I think I have to point out, viz., that he has made a slip, and that in making it he has misrepresented me.

In his footnote to p. 131 Mr. Lamprecht says that I "do not seem to take into account" the conflict between Newtonianism and Cartesianism, and also suggests that when I spoke of Hume's criticism of the "ancients" as being in "the usual Newtonian-Cartesian vein" I should be presumed to be lumping the Cartesians and Newtonians together quite generally, although, in that particular instance, I happened to say what was historically correct.

I should like to remark that on p. 6 of my book and somewhat more forcibly on p. 101 I made it quite clear that "experimentalism" was a different philosophy from "waning Cartesianism" with

its "*idées claires*" and that I discussed (as I thought rather fully) the main relevant points of disagreement between these parties, viz., whether Newtonian "gravity" was truly "intelligible" (e.g., in my quotation from Roger Cotes on p. 37 n), or, again, regarding the alleged intelligibility of the communication of motion by impact (where Hume, as I showed on p. 137 drew upon the criticisms that the relativity heterodox Cartesian Malebranche made upon the standard Cartesian view). I did, therefore, make *some* use of the opposition between these parties; and it never occurred to me to suppose that a phrase correctly stating the common opposition of both Cartesians and experimentalists to scholastic "forms" and "qualities" could suggest to any one that they agreed on other matters.

No doubt, if Hume's principal object, or even if one of his principal objects, had been to attack the Cartesianism of Locke—in his reference to the Cambridge Platonists Mr. Lamprecht seems to have forgotten the argument of Henry More's *Enchiridion Metaphysicum*—I should justly be censured for not having referred much more fully than I did to the controversy between Newtonians and Cartesians; and the censure may be deserved on other grounds not indicated by Mr. Lamprecht, but possibly present to his mind. I can not believe, however, that Hume expressly and consciously intended to attack a carefully selected part of Locke's theory. When he set himself to attack *a priori* demonstrations of the causal principle he cited Hobbes, Clarke, and "others," as well as "Mr. Locke" (*Treatise*, Book I, Part III, Section III); and his reference to the Cartesians in Section XIV regarding "the secret force and energy of causes" was of the type that I should call constructive, not polemical, criticism.

Obviously this explanation, on my part, has no bearing upon most of the important questions of interpretation that Mr. Lamprecht raises in his valuable and (to me) very interesting review. I could not deal with these briefly, and it is no part of my present purpose even to suggest that I was right, although my silence should not be taken to imply that I allow I was wrong. I want to point out, quite simply, that Mr. Lamprecht, in the way that happens to all of us, has made a slip.

JOHN LAIRD.

KING'S COLLEGE, ABERDEEN.

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THE JOURNAL OF PHILOSOPHY

PERCEPTUAL AND MEMORY PERSPECTIVES

THE philosopher, perhaps because of his proverbial impecuniosity, has had much to say about the penny; but what he has often said unnecessarily conflicts with common sense. Let us take the visual experience of the blessed penny. Here I hold it in my fingers and turn my hand about. It looks different with every turn. Its shape undergoes all the changes from being round to being a rather slim bar. Common sense says that it is the same penny that I have been seeing and handling all the time.

But now comes a philosopher who says: "It is quite true that the visual shapes of what you have been seeing have been changing, but, of course, if the penny itself has a shape, it can have only one shape. And therefore what you have been seeing is not the shapes of the penny itself, but merely the 'appearances' of the shape of the penny. And since these appearances can not all belong to the penny in itself, we must find a place for them not in the penny, but somewhere else. We must set up a class which we shall call 'sensa.' The word 'appearance' is ambiguous. When you say that a thing appears to be so and so, there is danger that you may think that the appearance somehow *belongs to the thing*, and it is just this supposition that you must guard against at the peril of your philosophical life. By giving the name 'sensa' to what in the case of the penny we were dealing with, we escape the danger of supposing that the seen qualities are qualities of the *penny*. They are things of another sort altogether, in some adventitious way connected with the penny. When the penny is in a certain external relation to your eyes, a *sensum* is experienced. It is true that those of us who have the wit to recognize that the *sensum* is not a quality of the penny disagree violently among ourselves as to its metaphysical status. Some of us make it 'mind-dependent,' some do not; and among those who do not, some even go so far as to recognize it as a citizen of a realm apart from the corruption and thievery of time. But these differences of opinion are another matter. What is of prime importance here is the recognition that *no sensa* are qualities of physical *pennies*, whatever else they may be."

All this is very well, once it is granted that if a penny itself has a shape it can have only one shape; but why grant this *dictum de*

uno? I see no reason for granting this claim unless it be for the joy of witnessing or even engaging in a fight as to what shall be done with *sensa*, once they have been detached from the penny.

Of late there has been a well-recognized tendency to treat certain phases of experiences as instances of perspectives. The reader need only recall certain features of the philosophies of Whitehead, George Herbert Mead, and Lord Russell, to assure himself of the truth of this statement. It is my purpose in this paper to fall in with this movement and if possible to carry it still further. First let me touch briefly upon the logic of perspectives with a view to seeing whether perceptual and memory experiences may not adequately be treated as perspectives.

Among relational complexes there is an important kind of which a group of brothers is a familiar instance. Here the brotherhood relation is conditioned; i.e., it is derived from a relation in which each of the terms, A, B, C , stands to F and M , the common parents. The parents are not members of the group of brothers, but it is by virtue of the sonship relation in which each member of this group stands to F and M that A, B, C are brothers. Let us designate the sonship relation by r_1 , and the brotherhood relation by r_2 . An obvious but incomplete analysis of the logical situation reveals a number of complexes, $Ar_1 (F, M)$, $Br_1 (F, M)$, $Cr_1 (F, M)$, and a resultant complex Ar_2Br_2C . In symbolic logic the word "inherit" is generally used in a strictly linear sense; but here we have inheritance of the cognate variety. Two males inherit brotherhood from their common parents. When we have a relational complex such as Ar_2Br_2C , given above, where r_2 is cognately inherited from a term or set of terms such as F and M , to which A, B, C are each related by a relation r_1 , I shall call $r_1 (F, M)$ the "condition" of the complex Ar_2Br_2C ; and for brevity I shall also call either r_1 or (F, M) the "condition" of the complex, it being understood that whichever is mentioned the other is likewise meant.

It should be observed that the condition of a conditioned complex is not necessarily the cause of the physical existence of the terms of the conditioned complex, although in special cases it may be. Such a special case we have in the instance of brothers, who owe their physical existence to their parents. But just at present I am dealing with the *logic* of relations, not with physics or physiology. To name a few relational complexes whose conditions are not the causes of the physical existence of the terms of the complexes, we have roommates, fellow-townsmen, U. S. Senators, France's allies in the World War, and the satellites of Jupiter. It should also be repeated that the condition of a conditioned complex is not a term in *that* complex.

In projective geometry we have instances of conditioned com-

plexes. Take any point O called the center of projection, and consider a group of other points in their respective relations of direction from O . Thus all points in any straight line-segment OM are projectively (i.e., directionally) identical with respect to O . Let A and B be any two points on OM , and let C and D be any two points on another straight line-segment ON . Consider the straight line-segments, AC and BD . Any point F on AC is projectively identical with some point G on BD , and the projective (i.e., angular) length of AC is equal to the projective length of BD , in the projection from O . By giving the plane determined by OM and ON a rotation of 180 degrees about the line OP that bisects the angle MON , we get two surfaces described by the rotation of AC and BD . Any point on either surface is projectively identical with some point on the other surface, and the projective areas of the two surfaces are equal.

When in the preceding paragraph it is said that certain lines are projectively equal in length, and that certain surfaces are projectively equal in area, it is meant that these mathematical elements *where they respectively are* are equal in the projection from O . More generally, *any spatial element in a projection has its projective characters where it is, this "where" being determined in the first instance by distance and direction from the center of projection.* Thus in any projection there are two places under consideration, the place *at* which and the place *from* which. The projection, while "transcending" either place, does not transcend *itself*.

Now the word "projection" as used in geometry is likely to mislead the unwary. When a mathematician "projects" a line, he is doing one of two things (or both). *Either* he is paying attention to a line already given in the postulates with which he is operating, *or* he is actually or in imagination drawing a line from one point to another. The word "project" is literally applicable to the latter act, and it is applied to the former only by metonymy. The pure mathematician does not literally project, i.e., draw out any lines. The reason why it is important to emphasize this is that there is a philosophical theory that our percepts are projected or thrown out from the brain into a space that arises as the result of this projection. In this literal sense there is no evidence that our percepts are projections. But in the figurative sense I shall maintain that the spatial characters of our percepts are projections. They are initially where we perceive them, but we can in imagination throw out lines from the center of projection, say from the focus of one of our optic lenses, and we can then describe seen spatial relations in terms of these projections. It might not be a bad guess that the philosophical doctrine of perceptual projection was suggested by a mathematical tyro's view as the nature of projective geometry.

Because the mathematician was supposed to draw out in certain directions the lines he deals with, so the "mind" was supposed to throw out from the retina the space it sees, and to project into this space any percepts it receives. This theory is, of course, a pure myth.

Let us now pass to an application of projective geometry which all draughtsmen learn to make. I will describe it as simply as I can. Keeping one eye constantly closed, I place a cube on the table before me; and at right angles to the direction of the center of the cube from my open eye, I interpose a sheet of transparent material upon which pencil tracings can be made. Holding my head steady I look at the cube through the transparent sheet and trace on the sheet the projections of the seen edges of the cube. What I have thus done is to make a drawing of the outlines of the cube as seen from my position with respect to the cube. It is important to emphasize the thoroughly relational character of the situation involved in that performance. (1) There is the relation of distance and direction of the cube from the retinal focus of the pencil of light-rays that came from the cube through my optic lens. (2) There is the perpendicular relation of the sheet to the direction between that focus and the cube. (3) There is the relation between (a) what under these conditions I have drawn and (b) what I saw when I was drawing it. It is this last relation that I wish to emphasize here; but in emphasizing it I must not ignore two other relational facts: (c) What I have drawn is called a linear perspective drawing of the cube in the plane of the sheet, and (d) what I saw (among other things) was the cube *in the visual perspective*, the mathematical characters of the cube being determined by its distance and direction from my retinal focus. The drawing is *on* the sheet; and when the drawing was made the cube was *beyond* the sheet. In (d), the visual perspective, the cube *where it was*, as determined by its distance and direction from my retinal focus, had, *from where that focus was*, the perspective shape I saw.

But we often express this fact elliptically. We say: "The cube had . . . this perspective shape . . . where my eye was." I have indicated by omission-periods the respective places where four important words are left out, namely, "where it was" and "from." We then are likely to erect a theory on these omissions and say that what we saw was *where the eye was*; and since the cube was *not* where the eye was, we are constrained to say what we saw was *not* the cube, but *something else*.¹ Thus a literal interpretation of an idiom is made to distort the facts.

¹ There are many such tricks of language that trip the idiomatic philosopher. Many of them consist in idiomatic transpositions as well as ellipses. Thus: "I saw at the same time two flashes." It is not, however, the simultaneity

From the preceding account it appears that a linear perspective is a conditioned complex consisting of shapes and sizes of objects. The perspective spatial shapes of the objects are conditioned (among other things) by the directions from which rays of light from the respective parts of the objects arrive at the retinal focus; and the perspective sizes of the objects are conditioned by the distances and directions travelled by these respective rays to that focus. If a convex lens is interposed between the eye and an object, the rays arrive from more divergent directions, and therefore in the perspective thus conditioned the object is perspectively larger than it would be in the perspective conditioned by a "naked" eye. This "magnification" is not an illusion, unless incorrect inferences are actually or implicitly made as to the size the object would have in some *other* perspective.

In what has gone before I have been at pains not to prejudge the question whether the cube used as an example was a "physical" thing. But now I insist that there is nothing to prove that it is not. It is *measurable* and thus meets the requirement made by mathematical physicists for recognition of anything as physical. The fact that in different perspectives it has different sizes and different shapes does not prejudice its physicality, since physicists use *angular* measurements with as much frequency as superpositional measurements, and have well-known transformations for passing from one kind of measurement to the other. It is just as much a *physical* fact that the moon's mean diameter as actually measured from the earth is 31' 51.5, as that it is 2150.6 miles as hypothetically measured on the moon. In view of all this I assume as a *postulate* that, *unless there is reason to the contrary in any specific case, the seen spatial characters of objects in monocular perspectives are physical characters that belong to physical objects; however, they thus belong not absolutely, but with respect to the physical conditions under which the perspectives obtain.* If such a view is to have a distinctive name, I would suggest as the most appropriate name "perspective realism."

Before proceeding to consider other perspectives, it is desirable to enter upon a digression, on return from which we shall be the better able to go further. An obvious objection to my postulate is that after all the object *in itself* can not have all the shapes it is seen to have. But what is meant by an "object-in-itself?" Still dealing only with spatial characters, I think that the natural interpretation of "in" in the expression "object-in-itself" is a spatial one of two *seeings*, but of two *flashes*, that is reported. The correct statement is: "I saw two flashes occurring at the same time." Of course one should not cavil at idioms, since one must use them; but one should protest against the literal interpretation of all idioms.

interpretation. By an object-in-itself (*in eo ipso*), then, is meant—at least I mean—an object *where* it is. In view of what has already been said above, any spatial object-in-itself—i.e., any spatial object *where it is* as defined by its spatial relations to other objects—does *there* have the perspective characters we have been considering. But it does not have these characters *by itself* (*per se*), i.e., *apart from any relations* in which it stands. I should like to rescue the term “thing-in-itself” from the bad repute it has acquired as a result of the confusion prevailing between what a thing really is as part of a larger world and what a thing would be if it were all there is. In this world of ours I know of nothing that is *by itself*; *en revanche* I know of no reason for not saying that I know many spatial characters that spatial things have *in themselves*, i.e., *in the places where they are*, provided I qualify this assertion by saying that these characters belong to the things by virtue of their relations to something somewhere else.

Much confusion has arisen from not distinguishing between relations and relational characters. For instance, a log, and not the log's relation to something else, is heavy; but it is heavy in relation, say, to a twig. The heaviness is *in* the log *relatively* to the twig. The difficulty is accentuated when instead of using adjectives such as “long” and nouns such as “father,” we use abstract nouns such as “length” and “fatherhood.” Are these nouns names of relational characters or of relations? They are ambiguously used of both, and then the trouble begins. Thus when, in some exposition of the physical theory of relativity, we are told that length is a relation and not a character belonging to some long thing, we immediately demur because we have actually seen noses that have in themselves inordinate length. On the other hand, when it is said that long human noses have their excessive lengths *in themselves*, we interpret this as meaning that apart from their relations to anything else they have their excessive lengths; then, recalling elephants' trunks, we are tempted to say that any such excessive length is a relation in which human noses stand to elephants' trunks. Thus we are driven from pillar to post. But the difficulty is obviated when we distinguish between characters which things have in virtue of their relations, and the relations in virtue of which they have these characters.²

² It may be remarked, by the way, that the recognition of this distinction between relational characters and relations removes one difficulty involved in the question much discussed as to the proper way to categorize “beauty.” A painting or a face is beautiful: it has the quality of beauty, and it has this quality *where it is itself*; but it has this quality only in relation to some perceiver. Now some claim that beauty is “objective,” and seem to mean thereby that it belongs to the beautiful object *apart from any relation in which it stands*. Correctly finding that beauty is a character of the object, they pro-

Much has been written of the "ego-centric predicament." This predicament is only half of the story, the other half being an *altero-centric* predicament. There are always two "centers" in question for anything, the center *at which* it is, and the center *from which* it is what it is.³ The sufficient means of getting out of the ego-centric predicament is to find ourselves already out of it as a predicament by finding ourselves in a larger setting, where the "predicament" is no longer predicamental. And what holds of the ego-centric predicament holds also of the altero-centric predicament. The assertion of things-by-themselves puts us into an altero-centric predicament. The denial of things-by-themselves is but the denial of what we never find. The denial of things-in-themselves leaves us in a perplexity as to where to place and when to time the qualities that things are experienced as having where and when they are.

Let us now return from this long digression. What has been said of spatial qualities must also be said of temporal qualities. But when we come to these, we are faced with a linguistic inadequacy. In classical projective geometry time is ignored as it is more generally ignored in elementary text-books of classical Euclidean geometry. But in applied projective geometry, i.e., in spatial perspectives, we may not properly ignore time, for here the projections used are the lines of the propagation of light from object to eye. This propagation takes time. Thus we find ourselves dealing with four dimensions, inseparably related. Since not all parts of an object "foreshortened" in a perspective are at exactly equal distances from the eye, what is shown in a perspective drawing is not a picture of what is *physically* simultaneous. Of course in the case of objects in the immediate neighborhood of the eye, this deviation from the physically simultaneous is negligible. But when a projective drawing is made of sun and moon during an eclipse, the sun as shown is physically earlier by some eight minutes, and the moon is physically earlier by a second and a third, than the shown "station-point" or center of projection on the earth. Such a drawing is of a four-dimensional state of affairs, represented in only two of its dimensions: the third spatial dimension and the time dimension. It is incorrect to deny that it is a *relational* character. On the other hand, their opponents, finding correctly that there is a relation involved, incorrectly proceed to say that beauty is the relation involved. When later in this paper we have arrived at the discussion of biological perspectives, we shall see, I trust, that beauty may be considered a character that objects have in certain biological perspectives.

³ Even the thing-in-itself *par excellence*, the human ego, is indeed what he is where and when he is; but he is that only in relation to other things with respect to which he is that. Thus I am a sensing, perceiving, remembering, emotional, and volitional self. But in any one of these characters I am what I am in relation to what I sense, perceive, remember, love or hate, and will.

mension are left out of the picture. Dealing now with time only in its physical meaning,⁴ we have in such a projective drawing, not only a there-from-here picture, but also a picture of then-from-now. If a prominence on the sun is shown, it is a prominence of eight minutes earlier than the station-point shown. And if a "displaced" star is shown, this represents a "displacement" of a star years earlier than the sun shown. There may thus be many different *thens-theres* from the one *here-now*, and at the various "*thens-theres*," there were various *characters* as from here-now.

Passing from purely geometrical and from physical perspectives, we come to physiological perspectives, an instance of which we have in binocular vision. It is a matter of common knowledge that there is an integrative function performed by the central nervous system. No purely mechanical instrument that can effect such integration has ever been devised. Light passing through two mechanical lenses, disposed with respect to each other as are the two lenses of the normally functioning eyes of a human organism, will not, when brought to a focus, give a three-dimensional negative on a film of a camera. We get a blurred or composite and not a "solid" picture.⁵ But what we *see* with our two eyes is something "solid." Now is what we see *physically* solid? In this paper I can not give fully my reasons for the answer I shall give, but I can indicate one of them. But first I must ask and answer another question: "What is meant by 'physical'?" As I have already indicated, mathematical physicists are pretty well agreed in calling "physical" what and only what is responsive to instrumental treatment, plus all mathematical relations discoverable between the measure-numbers thus obtained. In other words whatever is amenable to the instrumental and mathematical operations at the disposal of physicists is physical. Using the word in this sense, it is clear that, when under normal conditions I have a solid in my binocular field of vision, that solid is *physically* solid. Although a camera will not give a "solid" picture of it, other instrumental operations are available that establish its physical solidity. Thus it will reflect light from its seen sides as well as from its seen front. But when I look through a stereoscope at two flat pictures, properly taken, is the "solid" picture I thus see physical? No, because it will not reflect light as a solid does. Not everything, then, that I see as solid is *physically* solid, although under normal conditions what I see as solid is physically solid.

This difference leads us to distinguish between physical and

⁴ For the difference between physical and perceptual simultaneity, see my article, "Dialectical Arguments against Relative Simultaneity," this JOURNAL, Vol. XXVIII (1931), pp. 421 ff.

⁵ I take the word of my scientific friends for this statement.

physiological perspectives. The latter includes the former, but it also includes something more. This something more is what I call exclusively physiological. But when we speak of a physiological perspective—whether it is exclusively physiological or not—we should not mean thereby something necessarily *in* the physiological *organism*. Just as what is in the geometrical or the physical perspective from *O*, is not in *O*, so what is in the physiological perspective *from* a station-point in an integrated nervous system, is not necessarily *in* that system. We may say that it is a *function* of that system, but when we say this we are not using “function” in the sense it usually has in physiology. When the physiologist says that the “function” of the heart is the pumping of blood, what he means is that the heart contracts and expands, and as a physical consequence blood flows into and out of the heart and then courses to the lungs, there to undergo chemical changes. There is a coördination between the physical processes taking place in the heart and various other processes (physical and chemical) taking place in other parts of the organism, and all these processes in their interrelation constitute life, which is a system of such mutually sustaining processes. Of course all these processes require an environment. There must be food for the digestive organs to convert into blood, and there must be blood for the heart to pump, and there must be oxygen brought into the lungs for the oxygenation-function of the lungs to work on, and so on. Each function is the performance of an act by an organ upon what is supplied to that organ, and that performance takes place *where the organ is*; and with the coöperation of other organs the results of that performance are radiated throughout the whole system, and ultimately to the environment.

But there is another meaning of the word “function” much in evidence in mathematics. Thus in the equation $y=x^{-1}$, y is a function of x . But here x is not *doing* anything, as the result of which y gets a certain value; no value of x is a *cause* of the corresponding value of y . But with every given value of x , there is a corresponding value of y , logically implied in the whole set-up under discussion. It is this kind of “function” that we have in a geometrical or physical perspective. With every given distance and direction of any line with respect to *O*, there is given a corresponding perspective length of that line in the perspective from *O*. But *O* is not *doing* anything to the perspective length of the line, nor are the distance and direction of the line from *O* doing anything to the line. These examples illustrate the difference between a mathematical “function” and a physiological “function.” It is unfortunate that the same word is used in different sciences in such different senses; for when we are dealing with something that has to be treated by both sciences there is likely to be great confusion.

A physiological function is performed with the expenditure of physical energy. Thus the heart in pumping blood imparts energy to the *blood*. But in the perspective obtaining when one looks at two flat photographs through a stereoscope, there is no evidence that the optic apparatus imparts any energy to the "*solid*" seen in front of the eyes. Indeed this absence of energetic transaction from station-point to objects in a perspective is a general characteristic of perspectives. Even in such non-physiological but physical perspectives as those obtaining when a convex lens is interposed between object and station-point, the "magnification" of the object does not involve any energy lost to the *object*. This kind of change of size of an object, in successive perspectives from one spatial station-point, is to be distinguished from the kind of change of size illustrated in the inflation of a balloon, where physical work is done on the *balloon*. The magnification of an object by a microscope or a telescope is a "function" of the instrument; but here "function" is used in a sense analogous to that employed in mathematics. With difference of convexity in the lenses there is a difference in the magnification. The lenses do work upon the mass-possessing *light-rays* passing through them, bending them; and the directions of these rays, thus physically determined, are the independent variables of which the sizes of the object in the perspective now obtaining are the *mathematical* functions. In a similar manner, the nerves leading from the two eyes of a binocular organism are working when light falls upon them, and this work converges upon a certain area in the brain (thence diverging in various directions). All this is *physiological* functioning. At some time during the process a physiological condition arises, whereupon a perspective obtains, having the retinal focus as its station-point; and this perspective is describable in mathematical terms. The spatial characters of what lies in the perspective are *mathematical* functions of the distances and directions involved. But *no energy is expended upon the magnified object*. While I do not pretend to adequate knowledge of all the relevant factors, I suggest that an attack upon the problem of vision under the assumptions thus made is more promising than one made on the assumption of "*sensa*" or on the assumption underlying extreme behaviorism. At least on the suggested theory one does not have to belie one's experience in putting inside one's head what is given as out in front of one's eyes.

We now pass on to such "secondary" characters as colors. Once grant, as our theory assumes, that the *spatial* characters of a seen physical apple are perspective characters of the physical apple where the apple is, but from where the seeing organism is, it is but a step to assuming that the *color* of the apple is also a perspective character of the physical apple where the apple is—i.e., of the apple-

in-itself. While, of course, it is always hazardous to insist on taking literally the words of one's mother tongue, there is no harm in cautiously *trying out* literal interpretations and adopting such as fit into the framework of a general theory and also seem fitly to describe what one finds in experience. I therefore try out the availability for this purpose of what is known as "aërial perspective" in the language of artists. Just as draughtsmen endeavor to do justice to linear perspective, so painters strive for aërial perspective on their canvas. Ignoring as irrelevant to my purpose what is called idealization in painting, I assume that a still-life canvas of a dish of fruit with an apple among them may be recognized as being a realistic picture of what is painted. In such a case it is an accurate representation of the apple that is present in my field of vision; and in such a case that *apple* out there where I see it is red with varying shades on different parts of its surface. Were I to choose a different station-point the shades would be different. But whatever the station-point, the *apple's* surface has those respective shades of color in the perspective from that physiological station-point. Were I color-blind, I am told that I should see colors that are different; but then there would be something different conditioning the perspective, namely, a different physiological condition in my nervous system. Were a glass of a certain chemical constitution interposed between my eyes and the apple, I should see still another color in the apple. Which, then, of all these colors is the color of the apple? Why not say that they are all colors of the apple, but that each color is the color of the apple in the perspective within which the apple has that color? Why, if the apple is to be colored, should it have only *one* color? If we assume that every color ever seen in any apple is the color of *that* apple in the perspective of the organism which thus sees it, its color may vary with the organism, with the varying conditions of light, with the varying distances and varying particles floating in the air, etc.; but whatever color there is, it is the color of the *apple* in the perspective determined by all the pertinent factors. The color is a function of all these factors; this function is analogous to a mathematical function. Given *such* factors, then there is given *such* color. But *none of the physical energy of the factors is transformed into the color quality*. The color does not start from the organism and rush out with finite velocity to the apple. Whatever rushing is done is from the apple to the organism. This rushing is with velocity c , and there is further rushing from retina to brain with different velocity; but there is not a re-traversing of this distance in the opposite direction with reverse velocities. Given all the conditions and presto! the color of the apple where the apple is!⁶

⁶ What is said about color I should with relevant qualifications also say about all other "secondary" qualities, and also about "tertiary qualities" such

Is, then, the color of the apple the color of the *physical* apple? The answer to this question is similar to the answer to the question whether (*whatever* be one's views as to what it is that is seen when one sees a red square figure) the redness seen is a quality of the square figure, and whether the squareness seen is a quality of the red figure. Of course, redness is not squareness, and every philosopher is familiar with the *impasse* that resulted when the Megarians wrestled with this problem. If, then, the *apple* is a *physical* apple, its redness is a perspective quality of the physical apple, except for those who wish to subscribe to the inanities of Stilpo.

But is the redness a *physical* quality of the apple? The answer is that, with the meaning now generally given by mathematical physicists to "physical," the redness is not physical, any more than the redness of a red square figure is a *mathematical* quality of that figure, although its squareness is a mathematical quality. The *quality* of redness does not yield directly to the metrical treatment of the experimental physicist. But while discussing this subject it is well to point out that without colors—which I here use to include brightnesses as well—we should have practically no science of physics, since accurate measurement would be impossible. For instance, the displacement of spectrum lines would never have been discovered by touch or smell or taste; ordinary thermometers and clocks could not be read with any precision without discerned color-differences; and galvanometers reveal their physical secrets only to the physicist who can see differences in the colors shown by needle and background. Some physical instruments could, of course, be read tactually, but with what sacrifice of nicety! A blind man can learn theoretical physics from books printed in Braille; but if the only physical observations were made by blind men, there would be no important books on physics printed in Braille. Without much exaggeration one can say that everything that physicists directly measure is either spatial or temporal distance between *colored* outlines, and this is done by use of standard distances between *colored* outlines. If everything that is needed as part of the apparatus of physics is physical, colors are indispensably physical; but the physicist calls "physical" only what he as physicist is interested in ascertaining. In this sense colors are *not* physical; they are instrumentalities used by him for a purpose, just as dynamometers and interferometers are instrumentalities. Nature supplies the colors, he has to construct the other instruments named. (But nature also supplies sun, planets, and stars, which are physical as beauty, and I assume that the integrative physiological function of the nervous system is the condition of the *unity* of all the distinguishable perspectives in one synthetic perspective, which in the suggested theory corresponds to what Kant calls the "synthetic unity of apperception.")

chronometers.) Each science has its own specific problems, and the solutions of these problems are what are "scientific" for that science; all else is either instrumental or irrelevant.⁷ But irrelevance of a character to a problem in hand does not prove its irrelevance to the *whole* nature of the thing that is under investigation with reference to *selected* characters.

What, then, is a "thing"? It is the integrity, i.e., the entireness, of all its relational characters, and it is all that just where it is and when it is (this "where" and "when" being also relational), but it is that only with all the respectiveness implied in all its relational characters. This may remind the malicious reader of the trite story of the Scilly (?) islanders who live by taking in each other's washing. Of course the point of the joke is its limitation to the single activity of *washing*. Let washing be only an example of men's multifarious economic and financial activities which are *all* collectively called "washing," and then the whole economic and financial life of the world consists in each person's taking in others' washings. (The trouble at present is that not enough washing is done by everybody to provide a living for everybody.) In the larger world we call the universe, everything lives by taking in some other things' washings. A joke ceases to be a joke when it is on everybody. If this be a joke, make the most of it.

The usual treatment of this problem is based on an unrecognized assumption of the absoluteness of space and time. If a natural event is supposed to be at some position in absolute space and absolute time, any relations between events may be thought of as stretching spatially and temporally between the respective positions of the events, or as being "out of" time and space altogether. But look at the matter from the point of view of the relational theory of time and space. Any relation between terms is *between* the terms, but the *kind* of betweenness is the kind of betweenness that the *relation* is. The equality in weight between an ounce of gold in Madrid in 1930 and an ounce of gold in Chicago in 1933 does not stretch *spatially* and *temporally*—does not lie *in* the space and time—*between* the two lumps; but, of course, the *spatial* distance between Madrid and Chicago is (tautologically) *spatially* between the two cities, and the *temporal* distance between 1930 and 1933 is (tautologically) *temporally* between the two years. Again, the brotherhood relation between the Prince of Wales and the Duke of York did not get spatially longer when the Prince journeyed to

⁷ Of course there is nothing original in all this. Professor Dewey and his philosophical colleagues have done great service in emphasizing relativity to interests in all scientific work. Cf. *Experience and Nature*, p. 266: Qualities of inanimate things "have to be rated and accepted in order to delimit a field of inquiry, but they do not enter into the inquiry as factors or terms."

South America, leaving the Duke behind in England. To repeat, each relation is its own kind of betweenness, and each betweenness is its own kind of relation. If the terms of a relation, such as similarity, are also spatially and temporally related, *they* are, of course, in space and time, but the similarity between them is not in space and time, i.e., the similarity is not itself thereby temporally and spatially related. If the existence of anything is defined as that thing's being in time (or in space and in time), then by definition the time-relations in which it stands do not *exist*.

What then shall we say of those time-relations? One reply is that they *subsist*. Now, if all that the word "subsist" means when applied to relations is that they relate without themselves being *ipso facto* in time and space, there is no objection. But unfortunately "subsistence" has come to mean enjoyment of a status in a realm *apart*. There is no evidence, however, that any relation has any being apart from the terms it relates. *Its being is its being-between*; and if we look for a word with derivation from *sistere* to name this kind of being, I suggest *intersistence*: relations *intersist*, and each relation has (or better, is) its own kind of intersistence. Equality intersists as equality between, distance intersists as distance between, direction intersists as direction between. The advantage gained by the use of a brand-new word is that it rids us of the danger of being misled by old associations. "Eternity" carries with it the aroma of a *Platonic* timelessness, as witness the philosophies of Santayana and Whitehead.⁸ But such a relation as matrimony, for instance, is not an eternal network, "contemporary with all time," and lying in wait to enmesh and entangle unsuspecting mortals; nor is there any evidence that it makes "ingression" from eternity into the event of a wedding.

I find abstract logic congenial when it conducts its affairs properly; but when abstract logicians descend from their abstractions into the concrete world of concrete things, into the world of natural objects and natural events, they have not always resisted the temptation to ascribe to the relations in this world a status *derived from the world of abstractions* to whose rare air the logicians' lungs have habituated themselves. That the abstraction of relations from the specific terms they relate in the world of nature, and the replacement of these terms by undefined *x's*, *y's*, and *z's* are of inestimable value in the task of thinking, is gratefully true. Such abstraction, in freeing the thought of relations from restriction to the specific terms they relate in experience, gives free rein to ideal con-

⁸ "That which without existing is contemporary with all times is eternal" (*Scepticism and Animal Faith*, p. 271). An "eternal object can be described only in terms of its potentiality for 'ingression' into the becoming of actual entities. . . . It is a pure potential" (*Process and Reality*, p. 34).

structions. But when what is thus ideally constructed is given forth as a set of eternal structures from which as "potentialities" the world of nature selects its "actual" relational fashions, we have, as again Dewey has repeatedly maintained, a *hysteron proteron*.

Returning from this digression, let us ask what is the date of a temporal perspective. The perspective of an eclipse contains dated events, the events at the sun when light was emitted from the sun, and the physically later event of the interposition of the moon between sun and earth. Furthermore it is conditioned by the physically still later event of the arrival of the sun's light at the earth. The perspective is a relational complex that requires time for its completion, and at the date of its completion, i.e., on the arrival of the light at the earth, what is *included* in the perspective is physically past. To repeat what has been said before, we have here a four-dimensional state of affairs. When the sun emitted *that* light the perspective was not yet; when the perspective is completed, the sun *as emitting that light* no longer is. This paradox reminds one of Zeno, but there is a difference. The perspective does not *last* eight minutes (as the astronomer finds to his grief), although it includes what in physical time was separated by eight minutes. What the astronomer does is to date the *eclipse* by the arrival of the light at the earth; and following his example we may *conventionally* date the *perspective* by its temporal station-point. But in doing so we should not deny the physical time-relations that enter into the constitution of the perspective, and, in denying them, say that the *present* perspective can not actually include physically *past* events.⁹

But such spatio-temporal perspectives as we have in vision are not the only spatio-temporal perspectives. There are, for instance, the *memory perspectives*.¹⁰ Just as a perceptual perspective includes

⁹ A careful consideration of such a perspective as that of a solar eclipse will bring out clearly the difference between what is called sensible or perceptual simultaneity and physical simultaneity. In the visual perspective we have sensible simultaneity of events that are not physically simultaneous. The fact that what is visually simultaneous is not physically simultaneous does not require us, nor does it authorize us, to construct a dilemma, and then seek to solve it by pulling its horns into its head at the station-point.

What has been said of the visual perspectives can be extended, with suitable qualifications which can not be set down here, to other perspectives which have other distance-receptors as their station points.

¹⁰ There is, of course, nothing novel or original in the assertion that there are "perspectives" of memory. More than a hundred years ago, Hazlitt wrote: "Seen in the distance in the long perspective of waning years, the meanest incidents, enlarged and enriched by countless recollections, become interesting." But what literature has abundantly recognized, philosophy has till lately tended to ignore. This is perhaps because literature is guided by an instinctive logic, whereas philosophy has depended upon an elaborate reflective logic that is only a small branch of logic masquerading in the proportions of the whole field.

what was physically past, so a memory perspective includes what was perceptually past. At least the *prima facie* facts point that way. Even many philosophers who are unwilling to rest their case on this evidence admit that what memory naïvely gives us is the past *as past*. Thus Professor Strong, who believes that what is in memory is a temporally present fact, chides a fellow believer for not giving an unbiased description of *prima facie* memory. "When I remember quite simply and unreflectingly," he says, "the past event seems to stand before me in *propria persona*, and I am conscious of nothing else. If I had no other source of information about memory than the experience itself, I should think those philosophers right who say that we have a power of immediately beholding the past. . . . The naïve rememberer is not aware that his image is a present existence. From the first moment of the image appearing, it is given to him as lying in the past. The image is not given to him as an entity distinct from the event remembered. It is given as being that event. In other words, he is not, at the moment of remembering, aware that his memory is representative."¹¹

But for the use of one word, this is an excellent statement of what is *given* in the memory experience. That one word is "image." As a reflecting epistemologist, Strong bethinks himself of the fact that what is remembered "differed in time and in character from the real event," concludes therefrom that it can not be that real event, and then calls it an "image." By the use of this word he introduces into his description of the memory experience a theory about that experience. There can be no objection to the introduction of theory into a description; such introduction seems inevitable. But there can be a question as to the acceptability or exclusive tenability of Strong's theory. The difference "in time and in character" of what is in the memory experience "from the real event," falls in beautifully with the theory that "the real event" is in two temporal perspectives, first an earlier perceptual perspective, and then a later memory perspective.¹² Just as the same cube may have one character in one spatial perspective and another character in another spatial perspective,

¹¹ "The Missing Link in Epistemology," this JOURNAL, Vol. XXIX (1932), pp. 676-677. So far as my experience goes, I think that Strong is mistaken in saying that in memory I am conscious of nothing else than the past event. There seem always to be *present sensible* factors as well as *past* factors in the total experience of which memory is a factor; there are at least present "organic sensations."

¹² Here "earlier" and "later" are, of course, used in accordance with the conventional dating of temporal perspectives, to which I referred in the paragraph before the last in the text. An adequate mathematical treatment would justify this conviction, but I can not go into this here.

so the same event¹³ may have one character in one perspective (the perceptual perspective) and another character in another perspective (the memory perspective). And as the difference in spatial location in the case of the spatial perspectives is not a difference in, say, the location of the same cube in two perspectives but of the respective station-points, so the difference in date in the case of the memory perspective may not be a difference in the date of the real event, but of the temporal station-points. *What thus logically may be, I assume actually to be.* Thus while I describe what I find in memory in terms of a theory, my theory allows me to accept the *prima facie* evidence of the memory experience without proceeding in cross-examination to browbeat the witness into saying what he does not mean to say. I merely bring out what was implicit in his first statement. He said "then," and I ask whether that "then" does not get its meaning from its temporal relations among which is the relation to the *present perceptual facts* of his experience? And when he answers "Yes," he does not feel that he has been improperly badgered into this answer.

There are many differences between perceptual and memory perspectives. For instance, in the former an object that is more distant in time is relatively smaller spatially. This is not necessarily the case in the latter. In other words the relation between temporal distance from station-point and spatial character of what is in a perspective is not strictly a mathematically functional relation. In connection with the temporal station-point of a memory perspective there is a physiological organism, whose nervous condition has presumably been changing since it was at the temporal station-point of the earlier perceptual experience, and its changes condition the character that the remembered object (comes to have) *had* in the memory perspective of that organism.¹⁴

Note the parenthesis in the immediately preceding sentence. What is included in the parenthesis is included as a sop to idiom. In any memory experience what is remembered *had*, not *has*, the remembered character. If we are to take memory seriously, the tenses used in reporting it must be true to the experience. We have already seen, when dealing with the physical perspective of

¹³ The "sameness" of the event is determined by its various relations to other events. A detailed treatment of this identification is impossible here. In principle it does not differ from the identification of "the same event" in two perceptual perspectives, say yours and mine when we say we *see* the "same event."

¹⁴ The relevant processes taking place in the organism are thus factors conditioning the memory perspectives. For this reason I call the station-point "physiological," to bring out the fact that it is not purely a chronogeometrical station-point.

a solar eclipse, that the sun in that perspective is not the sun *physically simultaneous* with the moon in that perspective, nor with the station-point of that perspective. The perspective *includes* what is not physically simultaneous; but "includes" is *grammatically* a present tense, and the "inclusion" is not a *physically present* inclusion in the *temporal* sense of the word "present." However, since seen sun and moon are both *sensibly* present, in the temporal sense of the word "present," the tense-form "includes" does not call for a demurrer; it calls only for qualification.

But the case is different when we come to a memory perspective. When we say that a memory perspective *includes* a past event, we are using a tense-form for the simple reason that English verbs in the indicative mood have no specialized tenseless forms. Hence in tenseless predication idiom borrows the present tense-form, as when we say, "All men *are* mortal," not meaning to restrict the assertion to men now living. Such "general presents" stand in the same relation to real tenses as propositional functions stand to propositions. In the same way, a memory perspective always *includes*, so far as I can judge from my experience, not only past objects and events, but also sensibly present objects or events. Perhaps the most adequate way of making the proper assertion is to use the circumlocution suggested by the recent parenthesis and say that in a memory perspective a past event *comes to have been* what we remember it as having been; and what it *comes to have been*, it *was*. But this does not necessarily mean that it *was* in the *contemporary* perceptual perspective what it *was* in the memory perspective. For instance, my breakfast table of this morning, in the perspective of any moment when I was eating, *had* certain characters; that same breakfast table in my memory experience likewise *had* certain characters, and these two sets of characters need not have been identical. But both *were* characters of my past breakfast table, one in one perspective and the other in another perspective. What I said of projection is true of all perspectives: no perspective transcends *itself*; the memory experience does not transcend *itself*, but it transcends the date of its station-point.

I now wish to bring out clearly the difference between the theory here presented and that of the instrumentalist. It is not possible here to go into details, but a few quotations will serve to remind the reader of the instrumentalists' position. "How," Professor Dewey asks, "can the present belief jump out of its present skin, dive into the past, and land upon just the one event (that *as* past is gone forever), which, by definition, constitutes its truth? I do not wonder the intellectualist has much to say about 'transcendence' when he comes to dealing with the truth of judgments about the

past. . . ."¹⁵ But it was Professor Mead¹⁶ who elaborated this position. "The implication of my position," Mead says, "is that the past is such a construction that the reference that is found in it is not to events having a reality independent of the present which is the seat of reality, but rather to such an interpretation of the present in its conditioning passage as will enable intelligent conduct to proceed. It is, of course, evident that the materials out of which the past is constructed lie in the present. I refer to the *memory images* and the evidences by which we build up the past, and to the fact that any reinterpretation of the picture we form of the past will be *found in a present . . .*" (p. 29, my italics). Again, "our pasts are always mental in the same manner in which the futures that lie in our imaginations ahead of us are mental. They differ, apart from their successive positions, in that the determining conditions of interpretation and conduct are embodied in the past as that is *found in the present . . .*" (p. 31, again my italics). It is true that Mead speaks of any such past as a "perspective of our own thought" (p. 166), and that he read before the Sixth International Congress of Philosophy a paper on "The Objective Reality of Perspectives" (reprinted as the last chapter of the volume containing the Carus lectures). But nowhere does Mead go and stay beyond the position that *a perspective is in the station-point of the perspective*. He first draws into the date of the station-point of a memory perspective what in the perspective was earlier than the station-point; and then, as a compensatory feat, he projects this intake backward in time as an "ideational structure" (p. 28). For Mead, as for Dewey, for Lovejoy as for Strong, everything in the perspective of memory is really *in the present*. The past thus being for Mead in the present, the pastness of the past is not the pastness of what *has* passed, but of what *in the present is ideationally passed backward*. Mead objects to the literally projectionist view of perception, mentioned above on page 311 (although with his

¹⁵ *The Influence of Darwin on Philosophy*, p. 160. Professor Lovejoy in criticizing Dewey's denial of knowledge of the past (*Essays in Critical Realism*, pp. 63 ff.) does it from a point of view in one important respect identical with Dewey's; both assume that a "present" memory is ontologically confined to the present. From this point of agreement Dewey goes on to deny "knowledge" of the past, whereas Lovejoy goes on to the assertion of a "representative" function in memory-knowledge. I suggest the discard of the point of view common to the disputants. Both put what is in the *perspective* into the *station-point* of the perspective. In this suggestion I follow the example set by Dewey on other occasions, as when, for instance, he proposed to circumvent the discussion of the issues between interactionism, parallelism, and epiphenomenalism by denying the common premise of all the controversialists (*Experience and Nature*, p. 252).

¹⁶ In his Carus Lectures, *The Philosophy of the Present*, to which the page references in the text are made.

emphasis on the "manipulatory area" he is perilously near to making of vision a projection); why does he adopt a literally projectionist view of memory?

For Mead there is never a "reference" in any present to any past other than that which is ideationally constructed in the present in which the reference is made (p. 30), and yet such pasts are continually changing (*passim*). It is difficult to understand how, under these conditions, it can be known that such pasts do continually change; and yet Mead somehow knew, else with his almost incomparable intellectual honesty he would not have written what he wrote: "When one recalls his boyhood days he can not get into them as he then was, without their relationship to what he has become; and if he could, that is if he could reproduce the experience as it then took place, he could not use it, for this would involve his not being in the present within which that use must take place" (p. 30). When Mead was writing this, was he not *making reference* not only to an ideationally constructed past, but also, by contrast, to a past as it was in a contemporary perceptual perspective? The necessary affirmative answer to this question brings out an important difference between a perceptual spatio-temporal perspective, and a memory perspective. In the former the *physical* pastness of what is in the perspective is not *given*; it is *inferred* from knowledge gained with regard to the finite speed of physical propagations. In the memory perspective, the *perceptual* pastness of the remembered object is *not* inferred; it is *given*. That the object remembered had in the earlier perceptual perspective a different character from what it had in the memory perspective is an *inference*, and all inferences involve references. For the naïve rememberer the naïve memory is never mistaken. And for my theory it is never mistaken, *when* it is taken just as it is, namely, the past *from the station-point of a later perspective*; any mistake consists in wrongly taking the characters and relations which an object or event had in a memory perspective as being necessarily the characters and relations which the same object had in the earlier perceptual perspective, just as a sensibly "elliptical" character which a penny has in a perceptual perspective may be wrongly taken as an "elliptical" character it has in some other perspective.¹⁷

¹⁷ It is impossible in this paper to make a detailed comparison between the perspective theory of the past, here presented, and the theory of the instrumentalist. But there is one further comparison I wish briefly to make. Judged from the point of view of the perspective theory, Dewey is correct in making any past within a perspective a "content" within that perspective (*op. cit.*, p. 161). "The content," he says, "of any idea about [I should say "of any perspective of"] yesterday's rain certainly involves past time." But when he goes on to say (without italics): "but the distinctive or characteristic aim of judgment is none the less to give this content a *future reference* and function,"

If space had permitted, I should in this paper have contrasted the view presented in the earlier part of this paper with Russell's treatment of the "place at which" and the "place from which," as given in his *Analysis of Mind* and *Our Knowledge of the External World*. There is an important difference, in spite of similarity of terminology; but the development of this difference must be deferred to another occasion.

In this paper I have often used "perceptual" and "sensible" as synonymous. I have done this for the purpose of simplifying the problem. But this fact should not be taken to mean that what Russell, following Semon, has called "mnemic" factors do not in my view condition characters of objects in perceptual perspectives. But the discussion of this complication, as well as the discussion of many other features of experience, such as are found in the "experience" of historical, geological, and astronomical pasts that are *not remembered* pasts, as well as of really imaginary objects, hallucinations, etc., does not lie within the scope of this paper.

Nor must it be supposed that in giving a *logical* account of perceptual and memory experience I have thought to *identify* logic with experience, any more than a mathematician, in giving a mathematical account of a rectangular sheet of paper, should be interpreted as meaning that the sheet of paper is just and only a *mathematical* rectangle. As Dewey has persistently maintained, any experience is a "part of nature," not a logical construction; and unless "nature" had "experiences" within it, no mere logician, were then a logician possible, could spin a real nature out of his logical "constructions." Nature is not something existing by grace of logic; logicians exist from time to time by grace of nature; and when they do, they proceed to pay attention to certain features of nature, abstracting these features and freely manipulating them, he is justified only on the assumption that he is giving an arbitrary limitation to the "reference and function" of judgment. If he means that naïve memory is not a "judgment" about the past, I should be willing to agree with him as a matter of terminology. But if he denies that there is frequently a "reference" to an earlier perception, I should say that his assertion does not tally with my own experience. Often my interest in discovering what the past was when it was present in my previous perception, differs from my interest in what the future will be in my later experience, not in what I am going to *do* about it, but in what I am going to *judge* about it. If all that the "prospective reference" in judgment means, when one is in doubt, is that one is interested in *later* securing a valid judgment, I agree; but there may be an interest in securing a valid judgment *as to what the past was when it was present*, as well as in securing a valid judgment as to what the future will be when it will become present. And I take it that what the judgment is *about* is what is meant by the "reference" of a judgment. To agree that there is *such* a "reference" while asserting that "reference" is not the right word to use here is to raise a lexicographical issue, which can easily be settled by reference to lexicons.

thus producing "logical constructions." Then some of these logicians are rapt in wonder as to why some of their "constructions" fit nature so nicely. Others, their eyes in fine frenzy rolling, rave that Nature is their handiwork.

EVANDER BRADLEY MCGILVARY.

UNIVERSITY OF WISCONSIN.

BOOK REVIEWS

Perception. H. H. PRICE. London: Methuen and Co. 1932. vii + 321. New York: Robert M. McBride. 1933. ix + 332 pp.

In the opinion of this reviewer, this book is one of the most stimulating and original studies in the field of epistemology and theory of knowledge which have appeared for some time. It is both an exposition of the author's views and a criticism of traditional theories.

Chapter I seeks to establish the reality of sensing and of sense-data. (As our belief in the existence of material things is based principally upon sight and touch, the author, for the most part, confines his analysis to these senses.) The term "sense-datum" is a neutral term, an ultimate, standing for something "whose existence is indubitable, something from which all theories of perception ought to start . . . and from which all past theories have in fact started" (p. 19).

(Chapter II.) Though sensing is *necessary* for the holding of beliefs in the existence of something beyond the sense-data, it is not *sufficient*. There must also be perception. Hence there arise the two distinct fundamental questions with which this study is concerned: (1) What is perceptual consciousness and how is it related to sensing? and (2) What is the relation between a sense-datum and a material thing when the thing is present to the senses of the being who senses the sense-datum?

Naïve Realism maintains in answer to (1) that perceptual consciousness is the *knowing that* there exists an object to which the sense-datum belongs, and in answer to (2) that, in the case of the visual and tactual datum, the datum *belongs to* a material thing, that is, is literally *part of the surface of* the thing. Negatively, the author concludes that both contentions are refuted by the phenomenological form of the Argument from Illusion, positively, that sense-data are somato-centric and that they exist only in the somato-centric complex. In Chapter III, other attempts to make the naïve realistic position defensible are reviewed, e.g., Prof. Whitehead's Multiple Location theory, but the author concludes that all attempts have failed of their purpose.

Chapter IV is devoted to extended critical scrutiny of the Causal

Theory. The latter's answers to the two fundamental questions are stated as follows: (1) In the case of all sense-data, "belonging to" means "being caused by"; (2) perceptual consciousness is fundamentally an *inference* from effect to cause. The author contends that the methods employed to prove these assertions are all artificial and unconvincing and, in fact, involve a vicious circle, because the facts of experience indicate that the conception of material thinghood is *innate* and *a priori* and that the notion of cause does not arise until we attempt to analyze the conception of a material thing. At the most, these arguments for the Causal Theory "will only prove the existence of *some* non-sensible something having an ordered plurality of factors: they will not prove the existence of a material world" (p. 99).

In Chapter V the author begins the exposition of his own answers to the two questions. A sense-datum is a particular existent. Visual and tactual sense-data are *taken to be* constituents of the surfaces of objects, but since it is obvious that some actually are not, e.g., hallucinatory data, it is equally obvious that they can not be *defined* as such. Let us call them *expanses* or *extents*, for these terms imply that they have size and position without affirming that all sense-data are constituents of a physical surface (pp. 103-113).

Sense-data are not substances but events. However, they can not be characterized as physical, mental, or cerebral events. All we can say at this point in the analysis is that (1) there is a relation between sense-data and the psycho-cerebral compound; (2) a sense-datum is always part of a sense-field; (3) all sense-data (except hallucinatory) are united with external objects by the relation of "belonging to" (to be explained later); (4) all sense-data which belong to the same thing, even those sensed by different minds, are somehow united with one another (pp. 116-138).

In Chapter VI, the author temporarily drops these problems and turns to a consideration of perceptual consciousness. The first stage or primary form of perception is *perceptual acceptance*. In this stage the perceptually conscious subject *takes for granted*, when he senses a particular visual or tactual sense-datum, that there now exists a material thing to which this datum "belongs." This is not inference, nor belief, nor knowledge by acquaintance, nor knowledge of facts about. It is primitive credulity. The ostensible object is not a particular. What is taken for granted is that so-and-so exists, that a material thing exists, that it is grass, etc. But this taking for granted is implicit, not explicitly expressed; hence it is also not judgment.

(Chapter VII.) Of course, perceptual acceptance need not be correct. It must be progressively confirmed by a successive series

of perceptions, in which case the second stage, *perceptual assurance*, is reached. When this process succeeds we actually do find that behind or underneath the original expanse there is some specific material thing, e.g., a table or a wall. When the process breaks down we get a conviction of the non-existence of the originally accepted material thing.

It is obvious that this is a self-correcting or autonomous form of consciousness. Its validity can not be seriously questioned because it is "an irreducible form of consciousness, an impregnable ultimate." Nothing better can be got. To be sure, it can never be knowledge: "it can only be rational belief, based on extremely strong evidence" (p. 198).

In Chapter VIII, the author returns to the definition of "belonging to." To be assured that a certain sense-datum belongs to a material thing, we must be assured that it is a member of a certain sort of group of sense-data, a Family of Sense-data. A Family of Sense-data is a collection of sense-data prolonging itself through time, having for its center a standard solid situated in a certain place in a system of solids, and consisting, in addition, of a set of distortion series (of sense-data) and a set of differentiation series (p. 227). But this notion implies only sensible occupancy and not physical occupancy of space. The author's conception of the latter is explained in Chapter X. When the place where the standard solid is situated reveals certain causal characteristics, e.g., magnetic attraction, and particularly impenetrability, we accept this place as being physically occupied. Thus a material thing is a complex of a family of sense-data and a physical object having the above causal characteristics. Obviously then "we have no determinate knowledge of the intrinsic qualities of the physical object, though we know that it has some intrinsic qualities or other" (p. 296). Kant's notion of the thing-in-itself is therefore well-founded. The Causal theory unjustifiably identifies the material thing with the physical object and phenomenalism unjustifiably identifies the material thing with the family of sense-data. His theory of "belonging to" the author suggests calling the *Collective Delimitation Theory*.

In the last chapter (X) the author considers the problem of the origination of sense-data. That a sense-datum exists we know by sense alone. It is an event, but not an event in a world of complete things; it is an event of a unique order: it happens nowhere and to nothing. Individual sense-data are dependent, each on a certain mind, but families of sense-data are not, wherefore the world of complete things is public and independent of minds. This world is discovered, not made, and it is as real as any realist could desire it to be.

This book is not an easy one to read. Both content and terminology are distinctly original, and the author, especially in the critical parts, reveals a dialectical dexterity which, at least on first reading, seems at times to be a bit tortuous. On the whole, the present reviewer is very friendly to the author's position and especially so to his way of approaching the traditional problems. Perceptual consciousness is here permitted to speak for itself, without being at the outset embarrassed with a lot of metaphysical presuppositions.

For any serious criticisms to be significant, much more space would be required than this reviewer is allowed. However, several questions may justifiably be asked. In limiting his discussion so largely to the consideration of visual and tactual sensation, is not the author too much ignoring other sensory data which should be considered in a well-rounded theory of perception? Does the term "expanse" imply that the visual datum is always two-dimensional only? Does the author mean to imply that sensing is a distinct and self-existent mental process? This question is asked because it will occur at once to those readers who are inclined to question the definite differentiation of sensation and perception. The author agrees that an expanse has spatial position, shape, and size. Does not the mere awareness of such a datum then necessarily imply perception, that is, the "perceptual acceptance" of the existence of some thing? Of course, if the author means merely to distinguish sensation and perception *in abstracto* for purposes of analysis only, the above questions would not be particularly important.

On another point the reviewer is somewhat confused: On page 205 the author seems to imply that what is accepted in perception is a particular thing, whereas on page 166 he seems to deny this. What is the basis for the "knowing that" a material thing has "some implicit qualities or other," when it is agreed that we have no determinate knowledge of such qualities? Is it inference based on some compulsion such as logical necessity?

Families of sense-data "when they actually exist are mind-dependent events"; however, "facts about sense-data do not presuppose the actual existence of even one observer." The latter of these two statements will undoubtedly offend those who insist on the *a priori* postulation of a self which contributes something to perceptual consciousness and even to sensation. The reviewer assumes that the author, for the purposes of this study, wished to avoid any metaphysical assumptions. If so, his position on this issue might have been somewhat more definitely stated.

The above questions are raised not so much in the spirit of criticism as in the spirit of inquiry. After all, their occasion may be the

failure of the reviewer to discover the answers rather than the failure of the author to give sufficient consideration to them. Of one thing this reviewer is certain: Mr. Price has made a noteworthy contribution to critical inquiry.

MARTEN TEN HOOR.

TULANE UNIVERSITY.

Il Realismo Puro. CESARE RANZOLI. Milano: Società Anonima Editrice Dante Alighieri. 1932. 365 pp.

This volume is more interesting as an historical event than as a contribution to philosophy. Its realism, though somewhat attenuated, marks it in strong contrast to the prevailing temper of philosophic thought in contemporary Italy.

The doctrine, we are told (p. 9), is realism because it affirms the existence "of a reality other than our consciousness, endowed with attributes and laws which our consciousness knows, and does not create." It differs from "natural realism" in giving "reasons" rather than instinctive feelings as the basis of our belief in an external world (p. 11); from "aristotelian-scholastic realism," in making "objects and their images a single thing; but it can reach such a conclusion because it denies absolute value to the externality of objects and reduces it to the heterogeneity of their properties" (p. 11); from "critical or agnostic realism," in asserting that the diversity of objects from the act of knowing "could not be diversity except in so far as it is known as such and thus is comprised in the act of knowing, though distinct from it" (p. 12); from "idealistic realism," in denying the "ideal" character of the external object (*Ib.*).

There is no space to develop either the meaning of these differences or the proofs of theses based upon them. But it may be suggestive to say that Ranzoli's doctrine in its general outline is like that of James's *Radical Empiricism*, as developed in Mr. Holt's *Concept of Consciousness*. But whereas Mr. Holt in that book relied on such terms as "external relations," and "cross-sections," to give mentality or externality to his neutral entities, Ranzoli uses the word "moments." Thus we find that "the object in itself and the object known constitute a single reality" *atteggiata in due momenti* (p. 173). But just how these moments are distinguished from each other is not told nor how our *atteggiamento*—whose? why? on what occasions?—can produce so strange an effect. When we see in the end of the sentence that these moments are "absolutely distinct one from the other, yet invincibly united one to the other," we are more than ever mystified. The hand may be that of Ranzoli, but the voice is that of Gentile.

Reviews should not be given over to the indication of minor

errors, but Italian readers should be warned of the confusion between American neo-realism and critical realism on page 155.

GEORGE BOAS.

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JOURNALS AND NEW BOOKS

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D'Eyepnon, Fr. Taymans: *Le Blondélisme*. (Museum Lesianum, Section Philosophique, No. 15.) Louvain: Museum Lesianum. 189 pp. 32 fr.

NOTES AND NEWS

Professor John Dewey will give next January the Lectures on Religion in the Light of Science and Philosophy on the Dwight Harrington Terry Foundation for 1934 at Yale University.

Mr. Floyd L. Sampson has been elected as an instructor in the department of philosophy and religion at the University of Denver for the academic year beginning September, 1933.

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Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 7. March 30, 1933.

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Facts: The Logical Perspectives of the World.
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THE JOURNAL OF PHILOSOPHY

CONCERNING PLATONIC ESTHETICS

I

PLATO'S superlative praise of beauty is deeply rooted in Greek philosophy. Many observers, even Bosanquet in his *History of Aesthetics*, have failed to appreciate the natural and inevitable presence of esthetic perspectives in early Greek thought, because they expect esthetics to be a reflective discourse on works of art as given facts. But this second-hand treatment, which starts with Aristotle, indicates the decline of esthetic concern.

Early Greek philosophy is not only laying metaphysical foundations for science. Those gigantic formulations of "being" and "becoming" can and must also be interpreted as symbols of their authors' longings and heart-desires. They give shape to what they wished the world should be and look like. Those world-views, compressed in a few immortal lines, do not intend to describe what "base experience" or "disreputable sense-knowledge" has found to be matters of fact. They shape in words, as sculptors do in stone, the vision of a beloved world. Eros is known to be the oldest god, the shaper of chaos. Parmenides says it and Plato quotes him. This Eros is the love of the artist shaping his world.

In Xenophanes and Parmenides the one true being rises out of the turbulent and troubled dust of our shortsighted, practical, and selfish cares. This mortal world of illusions and miseries is like "heavy and dense darkness" against the victorious power of the serene light of heaven. This is Apollinic esthetics. The light of divine serenity shines over the world of Homer and also over the world of Eleatic philosophy. The ascent to this light opens the Parmenidean poem on being and recurs in the Platonic *Phaidros*. And the ascent of Apollo and his victory over the "heavy and formless" powers of darkness is the theme of the Parthenon gable. And this true being which is felt with the same joy as light is felt, is beautiful. It possesses perfect form. It is balanced like a sphere; it is blessed and happy in itself. It needs no change or improvement, because every change would destroy its completeness, perfection, serenity. All this is an accurate account of the esthetic judgment "this is beautiful," which means: this is so that I never could

wish it otherwise; this elevates me out of my world of incessant, real, and practical toils; there is something that must be unconditionally affirmed in its being as it is. Let the logicians point out the apparent contradictions in the Parmenidean Being, such as its infinite continuity and its finite and plastic shape. For esthetics there is no contradiction, for what is beautiful must be finite and comprehensible and must be perfect and self-sufficient. It is finite and yet defies the power of time, the reality of past, present, and future.

In Plato this Eleatic esthetics is preserved. Plato's idea of beauty inherits and enriches the Eleatic being. Beauty is universal:¹ nothing that is can refuse to be seen in its light. From the starry heaven to the movements of the soul expressed in the gestures of life and in the works of artists, everywhere is beauty shining through, like the Parmenidean light, in infinite degrees² and differences, uniting them towards this one point of view or "idea." Beauty is totality or wholeness become visible, the only idea that is visible.³ Beauty is time as "the moved image of eternity," "the necessary essence of becoming," the visibility of God, the goal of true love, as such independent of the beholder.

This emphasis on the visibility or shapeliness of beauty assigns to it its unique place among other ideas of totality. And in its function as value or goal of human love the esthetic and ideal motive of the Eleatic "being" is laid bare. Love for a balanced, harmonious, self-sufficient and unproblematic existence is the root of Greek art as thus revealed in Greek philosophy. It is an ideal. The cosmos is blessed and happy, but this "goal of love" stands in contrast to the "dense and heavy darkness" of human travail and mortality.

The Pythagoreans advance a step further in this esthetic symbolism. Harmony is harmony of opposites as already Herakleitos knew. Harmony means love or agreement or friendship of all things. How can it leave discord and strife outside if it is to be truly universal? The limiting form and the unlimited or formless stuff, the all-embracing logos and the concrete particular, must be reconciled. The thought of this reconciliation is the Pythagorean "number" as harmony of opposites. Things of sense-perception can be organized and ordered and so become "reconciled to the soul." This "number" is the reconciling "force" in divine things, in all human arts (technai) and in music (including poetry). The one continuous being of Parmenides and the human microcosmos are subjected to the same principle of harmony now, which

¹ *Hippias Major*, 287-288; *Symposium*, 210.

² *Hippias Major*, 289.

³ *Phaidros*, 250 C.

unites the finite and the infinite. As musical tones are arranged in mathematical proportions, so are the movements and the distances of stars. Space and time, the "limited and unlimited things," grow related expressing the same "mathematical" harmony. The world of things and of actions are fused, the "song of spheres" reverberates in human music.

For logic and mathematics the Pythagoreans have been over-rated. Their importance for esthetics, on the contrary, has been neglected. Their "number" certainly is not only a scientific method. It is much more an esthetic idea bringing things and sounds, cosmic and human movements, into a concrete harmony or fusion. This harmony is a symbol of the same love and longing that created the light and blessed being of the Eleatics. And it is a fundamental philosophical formulation of what the arts do: the temple limits the boundless space and at the same time reveals it, makes it visible through the vista it offers: architecture brings by contrast both the boundless and the limited into existence: sculpture unites life and death, vitalizes the stone and stabilizes life: graphic art conjures landscapes and figures and worlds of imagination upon the small vehicle of a vase: and music, as we saw, reveals the force of harmony as a world law.⁴

The Platonic idea of beauty has also absorbed the Pythagorean contribution. In the myth at the end of the *Politeia* the souls who see reality revealed "came to a place where they could see from above a straight line of light, straight as a column, extending right through the whole heaven and through the earth, in color resembling a rainbow, only brighter and purer: another day's journey brought them to the place, and there in the midst of the light, they saw the ends of the chains of heaven let down from above: for this light is the belt of heaven and holds together the circles of the universe, like the undergirders of a trireme. From the ends is extended the spindle of necessity, on which all revolutions turn." After describing the spheres of the fixed stars, of sun and moon and the planets, their colors and motions, Plato continues: "The spindle turns on the knees of Necessity: and on the upper surface of each circle is a siren, who goes round with them, hymning a single tone or note. The eight together form one harmony."⁵ Here the symbol of light "holding together the universe" is seen to be composed of the Pythagorean harmony: the world is a "composition," a symphony of tones and colors, which for Plato are the bases of all fine arts. The harmonies and proportions of music are the laws of the true and happy being of all things.

⁴ Cf. A. Mayer, *Die Einheit der griechischen Kunst*, Chap. I.

⁵ *Pol.*, 616.

The vision of beauty, however, is difficult to obtain. The perfect patterns of the stars and of melodies and rhythms alike help us to tune our unmeasured and chaotic minds.⁶ But if we do achieve this vision we experience an "unconditional and pure delight."⁷ This delight or enthusiasm naturally corresponds to the vision of the world as beautiful. It is unconditional, because it stands in contrast to those other pleasures which are conditioned by and relative to their contraries, as the pleasure of eating is relative to discomfort and hunger. It is pure because it is not, like the agreeable, a compromise or an adjustment to something else; pure esthetic delight is a subjective acknowledgment of an absolute value, the value of the self-evident and undubitable presence of being, real and sufficient and universal in itself. Pure delight is an unconditional affirmation of the bliss of the being that really and absolutely is. Negatively: it is not dependent on our itch of desire, in general on any existence that is only with reference to something else. Hence "the true Muse is the companion of reason and philosophy."⁸ We know now where this "companion" will lead us, if we follow her. Not everybody, however, is able to follow the lead. Let us ask what qualities we must possess to undertake the venture. What is required for esthetic living? In the first place it can not be learned or acquired.⁹ Technical mastery of instruments and media of expression is necessary for the true artist, but it does not make him.¹⁰ The brilliant technician is like the "tinkling bells" of the Apostle Paul: he is lacking love and may flatter himself by startling the many. The sense for beauty is a natural gift. Its essence is "divine madness," enthusiasm, unlimited love for what is visioned, ability to forget what is important and real for practical and relative worries and concerns. The ever-singing crickets are souls of people who "unconsciously died" forgetting to eat in order to praise Apollo.¹¹ This willingness and ability to become transported into realms of what practical common sense calls unreality, this imaginative flight into purely ideal spheres, the intensity of feeling, emotion, and experience are the tests of a truly artistic attitude. Without them the best poetic words or paintings remain dead and unrevealing things. And although it is a gift of the gods and can not be artificially bred, it is contagious. The true inspiration of a real and great artist like "the prince of spirits," Homer, can be transmitted by a truly enthusiastic and

⁶ *Tim.*, 47 B.

⁷ *Phileb.*, 51.

⁸ *Pol.*, 548 B. C.

⁹ *Phaidros.*, 244 B; *Ion.*, 533.

¹⁰ *Phaidros.*, 268 B; *Kratylos*, 425 D.

¹¹ *Phaidros.*, 259; *Ion.*, 534 B.

loving reciter of the poems, who in turn will stir and transport the imagination of the listeners. These three degrees of esthetic life hang together like "magnetic rings" and through such mediations the many still participate in the original vision or idea; they then experience the elevating force of the "sprouting wings of love" and the fusion of their own emotions with their artistic objects.¹²

Beauty as evident unity and balance of a manifold and as the harmonious tension of opposites demands as its subjective correspondence the esthetic life of pure delight. We may call this Eleatic-Pythagorean side of Plato's esthetics the problem of beauty as universal form. Plato has formulated it as form and foundation of esthetic life.

II

If we turn from there to the works of art and to the artist, we must admit that beauty, which defines the whole of all esthetic objects, the universe in esthetic perspective, is and can not be adequately embodied in any one single work of art. Particular works of art as "children" or "offspring" of particular artists naturally are involved in the artist's outlook on life and in the cultural relations in which the artist works. The vision of beauty, in its purity a universal problem, becomes mingled with cultural problems and values. This leads to an esthetic approach entirely different from the first one. It is the Socratic approach from the side of the human significance or content of beauty.

In Xenophon's *Memorabilia*¹³ Socrates is on record as having met the sculptor Kleiton, whom archaeologists suspect to be none other than the famous Polykleitos.¹⁴ And Polykleitos is the author of "canons" of beauty concerning the human body which were based on mathematical proportions. And against this Pythagorean line of the artist the philosopher raises the question of human expression as an essential part of artistic excellence. "The invisible works of the soul," the "appearing semblance of life," must be "imitated" in the work of art. "Sympathy and aversion, joys and sorrows, nobility and dignity, self-abasement and servility, prudence and understanding, insolence and vulgarity, are reflected in the face and in the attitudes of the body." These emotions and attitudes of the soul have a common centre or principle that makes them understandable. It is the principle of purposiveness. States of minds are stations or phases of striving for what seems good to achieve. Hope and disappointment, negative or positive feelings are expressions of success, defeat, or anticipations of reaching or

¹² *Ion*; *Phaidros.*, 275.

¹³ *III*, Chap. X; 3-4.

¹⁴ Utitz, *Geschichte der Asthetik*, p. 4.

not reaching intended ends. Hence art, which makes visible such states of mind, can also be judged according to whether its creations show fitness to ends or not. A beautiful breast-plate is not one that is made of precious materials, but one that fits the body and its movements. This functional esthetics also leads to the affirmation of degrees of beauty. The expression of a modest and subordinate end can be perfectly fitting, but if larger, more complex, and more comprehensive purposes find an adequate visible embodiment, there will be a greater beauty.

The Platonic Socrates resumes and expands these views. Content of art is the whole sphere of human actions¹⁵ in the symbols of "imitation." These actions can be free or involuntary, gay or sad, "the whole mixed tragedy and comedy of human life."¹⁶ It is the peculiar mission of art to present life's "thousandfold tendencies and oppositions occurring at the same moment," its unexact, irrational fullness in symbols of "sight as well as in hearing."¹⁷ The test of art lies in the joy and delight it provokes in the judgment of the best.¹⁸ It puts us in a playful mood as it is produced by a free play, resembling the child's spontaneous activity and expression.¹⁹ The artist is a universal mirror reflecting the whole circumference of appearances, whose symbols he presents to our apprehension. Since the content of beauty is inseparable from fitness and purposiveness true art must not be separated from life. Art betrays the soul and its levels of cultivation. The levels of art range from the confused and "many-colored" and "flattering" taste of the uneducated and sensuous and sophistic artist to the "simple," heroic, and great style of the true lovers of beauty. All good art thrills us with "fiery and stirring emotions" and moves us to tears and laughter.

In Plato's own works those demands are fulfilled: there is the flowery, ludicrous, and confused rhetorics of sophists, the ill-tempered violence of politicians, the drunken ribaldry of the cynical genius, the harmless stubbornness and foolishness of half-wits, but also the grand and simple line of heroic beauty. In the *Phaidros*, an early work of the middle period, to the different souls are granted different arts. And in the *Laws* is a passage²⁰ which seems to be the esthetic justification of the rich artistic variety in his own *Symposium*. The wine (symposium, i.e., drinking-together) should be used to release the vital passions and to relax the vigilance of

¹⁵ *Pol.*, 603 C.

¹⁶ *Phileb.*, 50; *Nomoi.*, 817 B; *Symposion*, end.

¹⁷ *Pol.*, 603, A. D.

¹⁸ *Nomoi.*, 669.

¹⁹ *Pol.*, 602 B.

²⁰ End of first book.

reason, in order that the soul may remain in touch with its own potentialities and be purified and exercised thereby. In the same way is the theatre justified.²¹

We saw that art must have human significance. That does not mean that art must exclude nature. For nature has analogies to human expression. Our environment, therefore, is a very essential element in any esthetic education.²² More: an esthetic education is not possible without bringing into harmony the bodily, natural forces with the spiritual or cultural aspirations of man. This unity of land and man, of body and soul, is the foundation of a true community and "of our national culture."²³ It becomes aware of itself in the great national festivals and in the glorification of its history.

The true artist is one in whom life and works are inseparable, who lives in his work and whose work is alive, capable of "leading souls." Art stirs up the lazy and earthly inertia of man and calms down and tempers the wild and enthusiastic flights of imagination by bringing both to a common focus of expression, in which all can share and in which all can become united. What would a work of art be apart from the living experience, the vital ground, the actualizing appreciation, but a "dead letter" and a "mute picture!"²⁴ That is why a beautiful, living discourse is better than a studied, solitary production; that is why a beautiful and festive life is better than its echo in a dead past.

In the work of art you meet the artist, you address him and he addresses you. A work of art is not a dead object which a neutral observer can describe and classify without becoming involved in it. Plato's philosophy of art is dialectical.²⁵ Through a dialectical meeting of minds works of art are prevented from becoming mummified; they are kept in the responsible sphere of actions of which account must be given and for which responsibility, a "yes" and a "no," must be assumed.

Art and beauty are not the same. Beauty is an eternal and universal idea, art is a human business. But the two lines of Platonic esthetics fill the formal demands or standards of beauty. Art should "imitate" beauty.²⁶

The bridge from beauty to art is found in the Socratic method of finding the one essential definition out of many diverse examples. Likewise does the artist not merely copy a particular, given reality,

²¹ *Nomoi.*, 675 B.

²² *Pol.*, 400.

²³ *Pol.*, 606.

²⁴ *Phaidros*, 275 D.

²⁵ *Phaidros*, 276.

²⁶ *Politikos*, 284 A. *Tim.*, 30 C. *Symph.*, 211. *Pol.*, 504, 591, 599.

but he selects and constructs his ideal and essential type of what strikes him as being esthetically significant in many experiences. (Hence Aristotle's "poetry better than history.")

Beauty can not only be given by the senses or any particular function, because it is the form common to an infinite number of sense-impressions. It is not only given through the utilitarian value of a thing, because it refuses to enter practical or utilitarian consequences. It is not only identical with pleasure, since there are pleasures which nobody would claim for their beauty.²⁷ The beauty of art can only be founded in the "imitation" of an idea of beauty. That means that the human content be brought into the form of organic wholeness, self-sufficiency, and harmony of opposites, which we found in our analysis of formal beauty. But this form is not accessible to each and any content. The content must be worthy of the form. The content must be great, important, essentially human, showing triumphant human excellence in the midst of the crushing forces of elemental nature.

Opposed to this idea of "classical art" is that art which does not "imitate beauty," because the content is too low-minded, confused, sentimental, sensuous, artificial, and idiotically realistic to attain the form of beauty. This is the sophistic art of flattery, "twice removed from reality," a commercial art which "produces" in order to sell, where the work is divorced from responsible life; it is the parasitical art living on the destruction of borrowed styles, a decadent mixture of all styles to beguile the weary hours of busy-bodies, a dishonest and insincere "art for art's sake" which lives in the moment by and for the fashionable applause of the many, but rancorous and resentful against the judgment of those who know. A matter of taste, certainly, but matters of taste are not arbitrary to Plato. Those who only relish the gifts of the "sugared Muse" have no judgment about the works of true art, while those who know the latter, are also able to judge about the former. The notorious banishment of jazzers and crooners and exhibitionists from the state and temple of the soul²⁸ is this judgment of good taste on bad taste.

III

But this expatriation of art in the name of reason and philosophy reveals a deeper problem, a painful antimony that is rending Plato's soul to the core. We know Beauty, the goal of love, the recognition of being as a blessed presence, if we have only love enough to see it, can not be discredited. Likewise art, for Plato, is not separable from the "imitation of beauty," it is next to phi-

²⁷ For this whole development, *Hippias Major*.

²⁸ *Pol.*, X book.

losophy one of the "highest goods." Art as such can not lead to the conflict. But art in its concrete work expresses a man. And this man transcends his own expression and thus becomes the problem of philosophy and philosopher at the same time.

Socrates makes the distinction between real and apparent beauty; the made-up girl may seem beautiful, the natural expression of health is. But where, if we follow this argument to its radical formulation, shall we draw the line between apparent and real? Is it possible to discover an appearance which undoubtedly and adequately reveals the true, infinite nature of the soul? Is there a congruence between reality and any appearing aspect of it? Plato denies the question. The esthetic fusion and balance between the outside and the inside is an illusion. It seduces man and lulls him in a sense of safety, while reality remains fundamentally problematic. The achievement of artistic perfection is not the law that governs our reality. It is a dream, to forget through the charms of the Muses this reality and its imperatives. Nothing perfect endures. And where it is found and taken for an ultimate revelation of reality it proves to be the greatest and most dangerous obstacle in the way to self-knowledge. Self-knowledge leads to such problems as the obvious incongruence of ideal postulates and their realizations. And in this certain uncertainty man, the philosopher, grasps his real situation and must be determined to accept it. The demand of reason that reality and life be a harmonious and intelligible whole transcends the fragmentary and empirical knowledge of man and renders it incurably open and forever problematic. Beauty and art, which seem to fulfill this demand, are therefore the most dangerous antagonists of real good and truth. The life of artistic beatitude and the life of real striving and search in opposition to untold obstacles are incompatibles and as such radical complementaries. As such they appear in the last book of the *Republic*, which contains the condemnation of artists and the myth of the immortal soul and the sea-god Glaukon. The latter's statue, disfigured and grown over by seaweeds, resembles ourselves as we know us in this world. What the true nature and value of our souls is, however, an infinite and undeterminable problem or task. The same contrast between philosophy and art is found in the *Symposium*, in which the art of Plato reaches unsurpassable heights and in which beauty is praised as the highest good. But notice the irony which lies in the rôle Socrates plays there. He comes and defies all rules of gentle breeding: he comes late, without shoes, brings uninvited guests, and insists on philosophical conversation instead of listening to music. And at the end Alkibiades points out his daimonic and critical and dialectical character, who refuses

to rest satisfied, who keeps the sword of unsleeping vigilance above the most enthusiastic estheticism. Socrates, for Plato, is the unforgettable symbol for the inadequacy and helplessness of a purely esthetic culture. The inside of the man, the soul and reality of life, opens its eyes on the beckoning stars of absolute ideals, compared with which the charms of beautiful appearance seem cheap and easy solutions. Esthetics can not stop at the analysis of beauty and art. It must go beyond and must evaluate beauty and esthetic life with reference to the whole of reality. The whole of reality is an absolute idea without any visible embodiment or fulfillment, "in power and dignity beyond being."²⁹ Facing this idea man becomes philosopher. In the light of this idea he recognizes the essentially limited, finite, and fragmentary character of his existence, but also the critical and infinite task of facing his problematic situation.

We have distinguished the Eleatic-Pythagorean and the Socratic side in Plato's esthetics. The Platonic side in Plato's esthetics is now before us. It can be formulated as a dialectical antinomy, a necessary struggle of reason within itself: on the one hand ultimate reality can not be expressed or embodied in esthetic forms. Esthetics must be destroyed in its ultimate claims and must be dissolved in the struggling process of reality. Only as a moment step or aspect of this dialectic can it be preserved. On the other hand beauty contains and preserves in the quiet and serene presence of its "being" the whole of life. It derealizes it and thus grants to us the presentiment of an absolute harmony of all opposites and is thus "the only home man has in this world, if he has any home at all."³⁰

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THE PROBLEM OF KNOWLEDGE

THERE is a way of conceiving the problem of knowledge that vitiates a good deal of both epistemological and metaphysical thought. It begins by postulating two terms, man and universe. These are defined, unwittingly perhaps, as exclusive of each other. Here is the universe. There, on the outside looking in, is man. Man desires to know the universe. He wishes to know the universe not only in its external aspects, but also with respect to its innermost essence. But he is most unfortunately situated for the accomplishment of his task. His position is external with reference

²⁹ *Pol.*, 509 B.

³⁰ *Symp.*, 210 E.

to his object of study. As a result, the metaphysical quest must be abandoned. Because he is outside of the universe, he is not numerically identical with it. Because man is not numerically identical with the universe, an impassable abyss separates both. Man can not know the universe because he is not and never can be the universe. It must always lie outside of him, however closely it may hem him in. But how can one know that which he is not? Vague and fleeting intuitions concerning the quintessence of things man may have, but there exists no way of verifying them. The utmost that man can achieve by way of a knowledge of the external world is a phenomenalistic knowledge: a knowledge of things and processes, their distribution in space, their sequence or compresence in time, and such other relations as observation and reflection may be able to detect. Science then, and not metaphysics, qualifies as the best and most certain knowledge of the external universe. Philosophy itself must cast away all its pretensions; it can not rival science; it too must become scientific. It must ground its assertions in experience; it must at no point contradict science; its entire content must always be subject to empirical verification. The chief function of philosophy is to abet and complete the task of science. Philosophy is to inquire into the methodology of science; it is to make articulate the basic presuppositions of science; it is to collate and unify the results of scientific endeavor. Philosophy thus becomes something practical; it becomes a useful adjunct to the laboratory; it acquires the status of the auditor of science, its expert accountant, its glorified bookkeeper. Its existence is thereby justified. Metaphysics of the speculative sort must be abandoned as a fruitless enterprise, a will-o'-the-wisp, a pompous and pedantic logomachy, a vain ado about problems that are unreal or, if real, insoluble.

To such a result is one led by the epistemological dualism that postulates a universe on the one hand, and man in a locus external to that of the universe on the other.

To this epistemology there should be opposed an epistemological monism. This places man and his mind within the universe, not outside of it. It makes the cosmos continuously one with man. Man indeed becomes the cosmos itself become conscious of itself. Man's being becomes one with the being of the universe. If this is so, the problem of the cognitive union of universe and man is disposed of, at least as far as epistemology is concerned. The ontological unity of cosmos and man, the unity that makes knowledge itself an ontological possibility, need puzzle no one. For man is *within* the universe. The external theory, that which depicts man scrutinizing being from without, as one might scrutinize a global

representation of the earth, arises from a failure to distinguish between a figure of speech and a description of facts. That the mind takes up a position outside the cosmos in order to see it in perspective and to arrive at a knowledge of it, is only figuratively true. But the metaphor has been thoughtlessly mistaken for an accurate description of the situation. Actually, the mind is always a part of the universe; it is always within the universe. The universe being the totality of all that has being, the mind can not step out of it for one instant.

Once this is recognized, the epistemological problem takes on a different form. One is tempted to believe that the question is no longer whether it is possible for man to acquire a knowledge of the ultimate character of being, but whether he can escape the possession of at least a modicum of knowledge of that kind.

It will, therefore, be maintained here that logic, intuition, and the fact of consciousness itself do reveal something of the fundamental nature of reality.

Can logic reveal anything of the fundamental nature of reality? Yes, for logic lies within reality, not outside of it. It is not an instrument in the employ of a student of being, with the locus of both student and instrument a point external to being. Logic is within reality, and therefore a slice of reality. To the question, "Is the universe logical?" at least this reply is legitimate: that fragment of reality that is known as logic is.

Logic is. It is here, within this very universe. It is a part of it, and a part of life itself. One does not go outside of life to find logic. One pursues logic while one lives, and one lives logic to the extent that one is sane. Only the psychotics can do without logic, and they, as a rule, do nothing—unless they possess some logic.

Then logic is. Its locus is within the real. But at just exactly what point in the real is it to be found? The answer to this seems to be: all of reality is its locus. For logic not only is, and it is not only within reality; it is apparently also in relation with all reality. It is somehow continuously one with all being. It is at least an ingredient of the ultimately real. Were this not so, a series of logical inferences, starting out from a true premise, would be unable to keep contact with truth at every step of the way. Logic is not the ultimate reality, but it appears to be one with it.

The ultimate must, if all of the above be true, be reckoned to be at least logical. It is more than logical; but logic enters into its makeup. This is not to state that logic and the other integral facts of the ultimate are to be conceived as occupying a side-by-side external relationship to each other; rather are they to be conceived as the many facets of a homogeneous one. The ultimate need not

be described as possessing logic as an organ; it may simply be conceived as logical.

Come now the naturalists, and with them Vaihinger and Bergson, and they do depone that logic is but a function of the human organism, acquired by that organism during ages of struggle as a result of certain fortuitous and useful and transmissible variations. Logic is but an instrument of adaptation. It is fitted to deal with the phenomenal world and with practical issues. Further than that it can not go. Logic is not meant for metaphysics, but for science, technology, the practical life, the economic and biological life. For both Vaihinger and Bergson, logic is impotent, not only before ultimate, but even before immediate, reality—for Vaihinger because the mind can know nothing except *sensa*, their sequence and com-
presence, and the content of a certain philosophy (Vaihinger's); all else is fiction, itself an instrument of adaptation,—for Bergson because logic is fitted to arbitrate practical issues only; to perform this task it must mediate a deformed picture of reality; the latter, a continuous impulsion, is by logic misrepresented as a discontinuous series of unchangeable states.

These depositions, however, when they do not prove too little, succeed in proving too much. In the cases of Vaihinger and Bergson, the indictments reach back and comprehend their authors themselves.

It is the naturalistic account that proves less than it sets out to do. It is guilty of a fallacy. No genetic account of logic can set limits to its function. No account of the origin of logic can validate or invalidate a single proposition broached by the intellect. As well might one endeavor to test the contents of a textbook of science by ascertaining the kind of press it was printed on. The question of the truth of the naturalistic account of the genesis of mind aside, it may be asserted that one simply can not argue from the biological origin of intellect to the truth or untruth of a single metaphysical notion that the intellect may ever entertain. No genetic account of logic can ever function as a logical criterion, and this for the reason that there is no necessary correlation between the truth or untruth of a proposition and the origin of the mind that entertains it.

The naturalists are guilty of yet another fallacy. It is illogical to declare that the practical origin of intellect unfits it for speculative metaphysics. There is nothing in the naturalist premise from which to draw the inference they do. The premise, "intellect came into being as a mode for dealing with practical issues," contains nothing within it to justify the inference, "the intellect can deal with none other than practical issues." It is conceivable that in-

tellec, if born to handle practical problems, might yet possess a capacity far beyond that called for by the needs of the biological and economic life.

Intellect can not for long mediate the process of adaptation and fail to ask what sort of a universe that could be that was responsive to intellect to an extent permissive of human adaptation. Intellect can not fail to perceive that a universe in which an infinitely long series of inferences, starting out from a single true premise, must be eternally in contact with reality, is a universe that is either logical or like unto logic. Intellect can not mediate adaptation to a universe except in so far as it knows that universe. Then to the extent that intellect does facilitate adaptation, the universe is knowable. But how is knowledge possible? Only on the supposition that cosmos and mind somehow enter into each other, exist the one within the other, share a common essence, enter into a unity that transcends them both.

And now naturalistic skepticism becomes explicable. Naturalism proceeds on the *a priori* assumption of the disparity of intellect and cosmos. For naturalism, these are two terms that exclude each other. And thus does naturalism come to beg the question. It asserts that mind can not know ultimate reality. But this is to assume first, that ultimate reality is neither in part nor in whole mind, and second, that mind and cosmos neither are one, nor enter into one. But to assert so much is to presume to know a good deal about the ultimate!

As for Vaihinger and Bergson, they overreach themselves. Their philosophies swallow themselves. According to Vaihinger, the mind can never apprehend aught but *sensa*, their sequence and co-existence, and the content of Vaihinger's philosophy. All else that mind creates is fiction. At least two criticisms may be made of this philosophy. The first is, that it asserts the very thing it denies. It asserts, by implication, that reality is knowable to an extent permissive of the classification of certain ideas concerning reality as fictions. The very idea of fiction implies non-fiction, with reference to which fiction can be discriminated.

The second argument that can be directed against Vaihinger's philosophy is a rejoinder to his contention that all philosophies but one are fictive, and that one his. This smacks of intellectual narcissism, but Vaihinger would perhaps declare the idea of narcissism a fiction, at least when applied to him. Yet Vaihinger's position is manifestly absurd. It is absurd to declare that his naturalistic account of mind contains within itself the entire circuit of human knowledge. If the human mind can know as much of reality as Vaihingerism comprehends, then the human mind can know real-

ity. If it can know the doctrines constitutive of Vaihingerism to be true, then it can know truth, and this even when the latter does not concern itself solely with the disposition, in space and time, of the objects of sensation.

Truth is of infinite extent. Either there is no truth, or there is a potentially infinite truth. Given a single true proposition, and its implications are infinite in number. Vaihinger might be disposed to admit this, with the proviso that the totality of truths would of necessity be confined within the bounds of his doctrine. Since his philosophy is the only true philosophy, all its implications, which means all truths, would constitute an extension thereof. Possibly so, but there is some likelihood that the implicative extension of naturalism leads far beyond naturalism.

Bergson's philosophy contains what is possibly a great truth, but the latter rests on precarious underpinnings. For to him intellect appears as a distortional function, unable sympathetically to grasp and faithfully to delineate the creative vital impulsion. The latter is known only through the insight of intuition. Unfortunately for Bergson's position, intellect is required to establish this intuition and its insights as constitutive of more than a delusion. It is no answer to say that intuition knows itself as such—such self-knowledge may itself be delusive. And Bergson's treatment of both intuition and the vital principle is anyhow intellectual. Then intellect is not entirely impotent in the face of that principle and the intuitive function that is supposed to mediate (would im-mediate be the better term?) the knowledge thereof.

And if intellect can be faithful to the truth in this instance, it may be equally faithful in an infinite number of other instances. Even if it be true that intellect can apprehend only the static, its function is nevertheless important, for in that case it can reveal the presence of persistent identities. It does this in Bergson's *Creative Evolution*, the vital impulsion, intuition, intellect, and the cosmos being such persistent identities. But if intellect can offer no more than a perverted idea of reality, then what becomes the credit rating of such an intellectual product as the content of *Creative Evolution*?

In fine, the naturalistic assault upon speculative metaphysics falls short, but in the hands of Vaihinger and Bergson, it overreaches itself and destroys its base. In drawing up their indictment, they employ as their instrument that which is the object of the indictment itself. Their critique of the intellect is vitiated from the start.

It is difficult to see how a dualistic or an absolutely pluralistic account of the cosmos can have room for human knowledge. It

would seem as if only a monistic account can relieve us from the necessity of a choice between scepticism and solipsism. A mind that is real, that has being within reality, and that is continuous with it, of a piece with it, will know reality; because it is the nature of mind to know, it will be unable to avoid a knowledge of reality.

The epistemological problem needs to be rephrased. The question is not whether the human mind can know reality. The question is, how much can it know? It can not avoid knowing it in some degree. It can avoid knowing more than it does. How much can it escape the knowledge of? How much can it know, and how much does it know?

Let epistemology commence with the given fact of the knowledge of the real. Let it adopt a monistic conception of the relation between knower and known. It may find it useful to follow the suggestions thrown out by Lossky and McTaggart. Once a relation of unity between knower and known is accepted as given, it can be made the object of investigations into the nature of knowledge. Until such a relation is posited, these investigations must lead to just such confusions of thought as neo-realism has been overtaken by, and this for the reason that the dualistic and absolute pluralistic accounts preclude all possibility of the very relation they seek to explain. Any account of mind that locates the latter without the cosmos makes impossible any relation between cosmos and mind other than that of sheer externality. But knowledge is to be conceived as a relation of internality. Mind is within reality, within being; it is being itself, in its aspect of self-consciousness.

As a working postulate, this proposition will be advanced: that the knowledge-relation is a unifying relation, the knower and the known being one, not in the idealistic sense, but in this sense, that they enter into a higher unity that comprehends them both. This higher unity, like every unity, is a manifestation of the integrative principle of the cosmos itself. Every integrative relation is a manifestation of this principle, and the knowledge-relation is such a relation. The knowledge-relation is an integrative-relation become conscious of itself.

This standpoint eliminates the problem of uniting knower and known, conceived as independent and exclusive entities. The history of recent and contemporary philosophy proves that the dualistic approach makes for a confusion that seems without end. It establishes the validity of Lossky's contention that an epistemology that begins by positing a separate knower and a separate known can find no way of bringing them together.

The view that is being presented here cuts the ground from under the problem by the assertion of the ineffable and inexplicable

unity of knower and known. This unity is accepted as a thing given, a primary datum, the existence of which is undemonstrable, being itself the ground of all demonstration.

The unity of the knowledge-relation is created anew with every cognitive act; yet it is the actualization of the potential unity of knowers with all objects capable of participation in a knowledge-relation. This potential unity lies beyond definition and demonstration. But if knowers can know, and things can be known, then knower and known are in some way fitted for each other. Were this not the case, every cognitive act would be indeed a miracle.

This is but to give expression to a larger principle, which is that every integrative relation is a tracing out along a given dimension of a pre-existent immanent and ubiquitous unity. This unity is assumed to exist as a given datum, an undemonstrable fact, an ineffable and unanalyzable condition of every particular integrative event.

There are many who read this who will call it mere verbiage, functioning to explain nothing and to conceal the ignorance of the writer. This sort of complaint will be made by those who demand what they term scientific answers to the questions that philosophy propounds. But philosophy can not furnish scientific solutions to problems for which science itself can not provide any. Science itself is in the final analysis compelled to rely on terms that are descriptive of data that are accepted as given, but that are also essentially unknowable. Such terms are energy, matter, force, cause, electricity, atom, electron, proton, cell, protoplasm, life, mind, will, evolution, and so on, when employed with an objective reference, that is, when used to denote objects or processes external to the users of these terms. The objects and the processes are ineffable, but they must be dogmatically postulated as given if the pronouncements of science are to possess any intelligible meaning. All thought, of any character, sooner or later—usually sooner—arrives at a point where use must be made of terms the meaning of which lies beyond adequate definition. These terms point to fundamental data that are given, accepted on faith, and that defy analysis and description. The meaning of these terms must be intuited, else they seem to constitute verbiage. It is their failure to take all this into account that is responsible for the difficulty that empiricists encounter in their effort to comprehend the terminology of mysticism and speculative metaphysics; it explains their tendency to characterize that terminology as composed of verbiage, empty words, wind, ghosts, and so on. But the ultimate terms in the vocabulary of empiricism also have reference to objects, processes, and relations that are unanalyzable and ineffable. They, too, seem but

fatuous verbal effusions to those that can not or will not intuit their meaning. Comprehension is never a passive process; it is always an active process, and intuition is always an active agent of the understanding.

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A REJOINDER

I HAVE hesitated to prolong a discussion between Mr. Lovejoy and myself¹ which has already consumed more space in this JOURNAL than its importance warrants. However, such is the authority of Mr. Lovejoy in the theory of knowledge, that, in default of formidable evidence to the contrary, his latest statement of the merits of the case might well be taken as final. And in that statement, involving as it does the charge of "misinterpretation," "strange distortion," and "bald misquotation" on my part, I can hardly acquiesce. Fortunately the necessary evidence for a reply is provided by Mr. Lovejoy's earlier statements and my own, and to these I will confine myself.

First, a few quite specific matters. As to the assertion (*D. G. B.*, 352) that a "comment" of mine "is based upon a quotation that omits an essential word," a comparison of *L. C.*, 69-70 and *R. D.*, 321 will show (a) that I have quoted the controverted passage precisely as it occurs in Mr. Lovejoy's text, with the two-letter word to which he attaches such importance intact and in its appropriate place; (b) that ignoring this exact quotation, Mr. Lovejoy describes as a misquotation what was not a quotation at all—I indicate such by the usual quotation marks; (c) that his objection is peculiarly pointless since his own "as if," as he wrote it and as I reproduced it, is much more damaging to his case than the statement to which he objects.

On my "complete misconception" of the relation of Mr. Lovejoy's theory to the common-sense dualism of the "plain man" (*D. G. B.*, 337) see the entire first chapter of *R. D.*, "Cartesian and Natural Dualism" (my italics) and especially page 24, lines 1-17. A comparison of *D. G. B.*, 337, lines 24-28, with this passage will be found particularly enlightening.

On what "is simply a bald misquotation" (*D. G. B.*, 339), Mr.

¹ The relevant texts are *The Revolt Against Dualism*, 1930; my review of it, "Mr. Lovejoy's Counter Revolution" in this JOURNAL, Volume XXVIII, pp. 29-42 and 57-71, and his rejoinder, "Dualisms, Good and Bad," Volume XXIX, pp. 337-354 and 375-381. The first has been referred to as *R. D.*, the second as *L. C.* For Mr. Lovejoy's rejoinder *D. G. B.* will perhaps be appropriate.

Lovejoy asserts that the phrase "a complete misconception" is not applied by him to "the charge of bifurcation." The sentence in question (*R. D.*, 87, lines 12-14) is as follows: "The objective relativist's account of the historic and logical origin of dualism is, in truth, a complete misconception—as should be sufficiently manifest from the first of these lectures." It is true that in this passage the word "bifurcation" does not occur, nor did I at any time represent it as so occurring. But what was "the objective relativist's account of the historic and logical origin of dualism"? Why, precisely that it originated in a "bifurcation of nature." It was in describing this origin that Mr. Whitehead coined the term (*Concept of Nature*, Chapter II). It was similarly employed by me in an article from which Mr. Lovejoy quotes frequently in the chapter in which this disputed quotation occurs, and with which he can therefore hardly be unfamiliar.

It is true that the term "bifurcation" has since been more loosely used, though not by me, to designate any type of dualism at all, and not merely that specific premise of a specified "Bad Dualism" to which I specifically and in italics applied it (*L. C.*, 34). But such usage, the only one which occurs to Mr. Lovejoy, would have been not merely "astonishing" as he finds it, but plainly silly, since I should then have been arguing that dualism (bifurcation) was the indispensable basis for dualism (*L. C.*, 34), and the like. If it had occurred to me that the use of a well-known term to designate the fallacy—or alleged fallacy—which it was coined to indicate, could mislead Mr. Lovejoy or anyone else acquainted with the literature on the subject, I should certainly have avoided a misunderstanding which makes nonsense of my own argument. In any case, however, Mr. Lovejoy still does reject with some heat my account of the relation of what I have called bifurcation to historic dualism and to his own view—it is "wholly a figment of Mr. Murphy's imagination:" (*D. G. B.*, 342) "a hobgoblin which he has himself conjured up" (*ibid.*, 343)—and I can only regret that irrelevant verbal associations have so far distracted his attention from the evidence on which that account was based.

As to the apparently unhappy result (*D. G. B.*, 339-340) of my attempt to exhibit the connection between the several premises and conclusions in Mr. Lovejoy's original criticism of objective relativism, I can only say in extenuation that I did my best. What is to be made of his restatement of that criticism, taken as it must be in relation to my assertion (quoted *D. G. B.*, 344, line 38 ff) which he now accepts as a correct representation of his own view, and which, as I have shown in detail (*L. C.*, 37-38), is flatly contradictory to his criticism, I should hesitate even to suggest.

For the rest, my difficulty with Mr. Lovejoy's latest statement arises from a reluctance—perhaps wrongheaded—to accept three assumptions which he makes throughout, but which seem to me less than evident. The first is that it is not possible for Mr. Lovejoy to commit himself to mutually contradictory theories, and hence that the fact that he sometimes rejects a given view is sufficient to prove, in the face of passages which at least seem to indicate the contrary, that he does not elsewhere maintain it. The second is that whoever recognizes the validity of indirect knowledge is thereby committed to the consequences of Mr. Lovejoy's theory about such knowledge, even though he explicitly rejects that theory itself. The third is that a discussion of the validity of a criticism of specific passages in *The Revolt Against Dualism* can proceed as though the passages in question had never been written.

1. The first assumption underlies the whole of Mr. Lovejoy's comment on my "misconception" or "misrepresentation" of his view or views. It is true that I have represented him as expressing on occasion views that he *elsewhere* flatly rejects, and which he may well be surprised to recognize when they are isolated for detailed and explicit consideration. Such procedure is hardly new in philosophical controversy. I recall with admiration the seminar on "representative ideas" in which Mr. Lovejoy revealed to us that James, Russell, Alexander, Whitehead, and others had held on one occasion doctrines which they explicitly denied on others, and that their views, when carefully worked out, entailed consequences they would have been surprised and even distressed to discern therein. That he still regards this type of criticism as not constituting misrepresentation may be gathered from his own most recent comments on my view.

But such criticism must recognize the *possibility* that these authors have contradicted themselves. If that be not conceded, then the mere fact, pointed out by Mr. Lovejoy himself, that they sometimes held an incompatible view, would be sufficient to show that they did not, even in the passages he has cited, commit the indiscretions he alleges. It may be the case that Mr. Lovejoy, unlike so many of his contemporaries, has never presented mutually inconsistent theories, or offered suggestions whose logical consequences were other than those anticipated. That is a matter for detailed analysis, and I devoted to it some seventeen pages in *L. C.*, 57 ff., where I tried to show that in fact one of his "dualisms" contradicts not one but a variety of doctrines to which he is likewise committed and which he has repeatedly urged. This argument is noticed in his reply only in a concluding pleasantry which accepts the variety without even referring to the alleged contradiction. Yet he unhesi-

tatingly proceeds on the contrary assumption, as in *D. G. B.*, 343 where he "can but marvel at the ingenuity which can convert into the 'plain denial' of a proposition the statement that it is 'beyond dispute'"—the point being that since he has explicitly accepted a doctrine as beyond dispute only a perverse ingenuity can account for my assertion that he plainly denies it. But I assure him in all modesty that my performance was less complicated than it appears. For the "plain denial," as the sentence (*L. C.*, 38) from which Mr. Lovejoy lifts those words would indicate, if he had completed it, refers to a statement in *R. D.*, 150, and the assertion of the same doctrine as "beyond dispute," to *R. D.*, 126–127.² The one proposition is not "converted" into the other, but the two are cited as mutually contradictory, to indicate that all is not well with a theory that involves their conjoint assertion. And the method by which such contradiction is revealed is one with which Mr. Lovejoy should be thoroughly familiar.

2. The second assumption is indispensable for his reconstruction of my view about knowledge from my criticism of him. Mr. Lovejoy observes (*D. G. B.*, 337) that my "reasonings" are "largely interwoven with an exposition of the contents of the book" (*The Revolt Against Dualism*)—a procedure that should not have been surprising, since I was writing a review and criticism of that particular book and not a general treatise on epistemology. But that the interweaving should be so close as to transfer to my view, or one I am supposed sometimes to adopt, the consequences I claimed would follow if his "Bad dualism" were accepted, was wholly unintended. Since I explicitly reject his view and its consequences, it is not difficult to show that if I were also committed to it I should be in "the most insecure of all positions" on the issues involved. But the evidence that I *am* so committed is drawn from a passage (*L. C.*, 70, cited *D. G. B.*, 352, 354) which is simply a *reductio ad absurdum* of Mr. Lovejoy and "the orthodox dualist," with neither of whom I had intended to identify myself. Because I there indicate that "transitive knowledge" *would be impossible if* Mr. Lovejoy's view were true, I am supposed forthwith to "deny expressly" the possibility of such knowledge altogether. But surely there is a neglected alternative here—the possibility that indirect knowledge may be in some respects different from Mr. Lovejoy's account of it, and hence that a rejection of the description is not necessarily a denial of the fact it purports to describe.

The legitimacy of the transition from *some* indirection in know-

² *A propos* of "misquotation," compare *D. G. B.*, 343, lines 20–22, which purport to be a quotation from me, with *L. C.*, 38, lines 29–35, of which, though the reference is not given, they present a garbled vision.

ing to this particular and objectionable sort was precisely the point at issue, and I tried to show its inadequacy not by invoking my own epistemological views to contradict it, but by the internal criticism provided by Mr. Lovejoy's specific statements in those passages where he deals at first hand with the problem of knowledge, and not merely with the vagaries of alternative theories. Such criticism is not to be met by the familiar reduction of one more critic of "dualism" (Mr. Lovejoy's version) to an admission of "dualism" (indirection in knowledge) plus a gratified observation that the critic has all the while been a "dualist" in spite of himself. The previous question is whether he—like Mr. Lovejoy himself—has not also been a "dualist" in spite of the "dualism" which renders such indirection incomprehensible. If the reader is interested in that question he will find the detailed analysis in *L. C.*, 57–71. I have nothing to add to or subtract from the account there given.

3. It would be interesting, if this discussion were not already far too lengthy, to examine the two meanings of "knowing" which Mr. Lovejoy distinguishes (*D. G. B.*, 342 ff.), and the very loose and inclusive rendering of a "copy theory" which he offers. It would, however, have no direct bearing on my own earlier analysis and to that I must here confine myself. The meaning of knowledge which I criticized was neither of the two now discerned, since it excluded the possibility of "knowledge" of sense data, whereas each of these permits it. *That* meaning the reader will find explicitly stated in *R. D.*, 129, line 30 ff., and applied quite relentlessly in the analysis of the "subjectivity" of colors (*ibid.*, 133–134). If Mr. Lovejoy has modified his position on *that* meaning of knowledge, his main criticism of "objective relativism" will have to be abandoned. If he has not modified it, he must be prepared to accept its consequences. A mere changing of the subject will not settle the matter one way or another.

Again, the copy theory I was criticizing was not that which holds that a datum "in some fashion represents" the unperceived attributes of external objects (*D. G. B.*, 378), but one which describes in detail the manner of this representing; e.g., *R. D.*, 318, line 8 ff. I welcomed *The Revolt Against Dualism* as an opportunity for precisely such a specific meeting of issues. If Mr. Lovejoy objects to my reading of that passage or knows a way of avoiding its implications, he has not indicated it. And here again I would simply refer the interested reader—if any there be—to the relevant texts.

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BOOK REVIEWS

L'Idéalisme Kantien. PIERRE LACHÎÈZE-REY. Paris: Félix Alcan. 1931. xii + 509 pp.

M. Lachîèze-Rey's study is a significant contribution to the body of scholarly literature on the Critical philosophy; it is an admirable exposition and defense of what might be called one of the classical interpretations of Kant's metaphysical writings.

The work possesses a peculiar unity due to the fact that the author's aim throughout is the establishment of a single thesis, namely, that the main trend of Kant's thinking and the logic of his most significant utterances lead to the doctrine of a timeless, dynamic, transcendental self which achieves self-realization through the creation of a spatio-temporal world of phenomenal objects, and of an empirical self existing in this world and phenomenally related to it—to a metaphysical idealism, in short, sharply to be distinguished from what the author refers to as metaphysical realism, in which the objective world is in a genuine sense real in its own right, as well as from a Spinozistic monism, in which the self is finally fused with an all-embracing Whole, and from a psychological idealism, in which the temporal flow of subjective experience is never transcended. Unlike Caird and Kemp Smith, M. Lachîèze-Rey does not attempt a systematic examination of the three *Critiques* or even a chapter by chapter study of the first *Critique*. In discussing the latter he omits detailed consideration of the categories and almost wholly neglects Kant's treatment of the proofs of God's existence; in the field of ethics, only the doctrine of freedom is mentioned, and that most briefly; and the larger doctrines of the *Critique of Judgment* and of Kant's religious writings are passed over in silence save for a few footnote references. On the other hand, Kant's discussions of space and time, of the transcendental and empirical selves, of the unity of apperception, of sensation and perception, the productive and re-productive imagination, the understanding and (more briefly) reason, of the several syntheses conditioning experience, of the phenomenal world and its transcendental basis, and of the general function of categories and schemata—Kant's various accounts of all these and other related factors of human experience are examined with the minutest care in the light of the philosopher's *ipsissima verba* as found in his earlier writings, in the first and second editions of the *Critique of Pure Reason*, the *Lossen Blätter* edited by Reicke, the *Reflexionen* edited by Erdmann, the *Opus Postumum* edited by Krause and Adickes, and in Kant's correspondence.

The author's method of procedure is to select for discussion a number of related central problems; to examine Kant's specific state-

ments (a large number of which are quoted or paraphrased) on each problem, taking them up roughly in their chronological order; to note other texts at variance with those already mentioned; and then to appraise the adequacy of Kant's whole treatment of the problem in question and the bearing of this treatment upon this or that more comprehensive doctrine. The reader gets, as a result, a sense not only of the numerous cross-currents and whirlpools in Kant's thinking but of the main currents and the larger flow of his thought as well. M. Lachière-Rey finds in the *Critique of Pure Reason* and the *Prolegomena* but partial anticipations of Kant's personal transcendental idealism and believes that in the *Opus Postumum*, despite its fragmentariness, this doctrine is most adequately and precisely formulated. Yet he has to admit that Kant nowhere has given a really complete or satisfactory account of its nature and implications. Like other commentators he has to content himself with the selection of that tendency in Kant's thought which seems to him most central and significant.

The author's arguments are far too intricate to permit of a brief summary, but the chief problems dealt with can at least be enumerated and the conclusions somewhat more fully indicated. In Chapter I, Descartes' treatment of the *cogito ergo sum* is criticized with respect to its implications regarding the self, its cognitive activity and the objects of its knowledge, and Kant's contrasting treatment of these subjects is summarized in broad outline. The author's interpretation of Kant's central position is brought into sharper focus in Chapters II and III by means of a detailed examination of Kant's several refutations of "l'idéalisme problématique." This involves a study of the nature and relations of the transcendental and empirical selves and of the status of the object of external sense. The remaining two chapters are devoted to cognate problems, i.e., of simultaneous apprehension; of the apprehension of time in the series of successive impressions; of the activity of consciousness in sensation, in the synthesis of the imagination, and in the judgment of perception; of the genesis of the representations of space and time; and of the relations of the self to time and of the representation to its object. The following quotations from the concluding chapter summarize some of the author's central conclusions.

... le monde sensible n'est qu'un monde des phénomènes, c'est-à-dire qu'il existe seulement, avec tous les objets qui lui appartiennent et avec tous les rapports qui unissent entre eux ces objets, dans la perspective de la conscience déterminante et comme corrélatif de la puissance organisatrice de cette conscience. A l'intérieur de ce monde, le moi empirique, traité comme un substrat déterminé par des états de représentation ou comme un pouvoir répondant à des excitations extérieures par des perceptions et des réactions motrices consécutives à ces excitations, n'est lui-même qu'un construit;—sa situation dans

le corps est purement fictive et idéale; l'introduction du corps comme intermédiaire entre les objets extérieurs et lui, l'idée que ces objets produiraient en lui par cet intermédiaire les *Empfindungen*, tout cela n'est qu'un mode de représentation que nous impose l'édification du système de l'expérience, et il en est de même en particulier pour la préexistence de l'objet relativement à la sensation car l'objet n'a ni existence psychologique ni existence en soi. [Pp. 450-451.]

The "object" of experience is not for Kant an independently existent entity which the self must accept and to which it must seek to make its representations correspond; it is rather the ideal goal of the self's creative, self-realizing activity, a goal, furthermore, never fully reached but ever striven towards.

... on doit toujours considérer l'objet comme un simple idéal de la liaison, et cela qu'il s'agisse de l'objet de sens externe ou de celui du sens interne, d'un objet particulier ou de l'ensemble des objets; l'*Univers*, l'*expérience*, l'*existence*, l'*entière détermination*, le moi empirique ne sont que des impératifs; ils sont contenus 'identiquement' dans le dynamisme constructeur de l'esprit comme le cercle dans la loi génératrice du cercle. ... [P. 452.]

The self, meanwhile, must not be conceived of statically or substantively.

... puisque l'esprit est activité et non pas chose, il ne saurait se saisir autrement qu'agissant; c'est donc seulement dans la *Selbstsetzung* ou dans la *Selbstthätigkeit* que la conscience de soi est possible; il faut arriver en quelque sorte à isoler cette activité à s'absorber en elle comme en un système fermé sur lui-même, antérieur à l'événement, mais accompagné de lumière intérieure, à se confondre avec la copule de position, copule qui unit la loi éternelle du *je* ou du monde à la représentation correspondante chaque fois qu'elle se produit. [P. 472.]

Neither is the self but a mode or moment of a larger Absolute.

... le Kantisme ... n'est pas une doctrine panthéistique; la loi éternelle de réalisation est chez lui intérieure à la conscience; ... elle n'est pas à proprement parler participable par d'autres sujets, elle leur est seulement transférable, ce qui montre que chaque moi forme un système fermé et complet; et, s'il en est ainsi, nous pouvons bien dire que le Kantisme nous permet réellement de saisir notre éternité: *experimur nos aeternos esse* [p. 477]. [Hence] ... il ... faudrait ... chercher tout le bénéfice positif de la philosophie kantienne dans cette conquête de l'esprit par lui-même, dans cette prise de possession par soi de la pensée, au lieu de l'apercevoir dans la justification de la science et de son objectivité. [P. 475.]

Yet the self, thus conceived, is not omnipotent.

Puissance génératrice des rapports d'Univers, autonomie de leur constitution, l'esprit peut bien avoir la certitude de se retrouver en eux; source et principe de la Nature, il peut déclarer avec sécurité qu'elle renferme nécessairement ce qu'il y a introduit selon ses propres lois, mais il ne saurait aller plus loin; le domaine de ses assertions légitimes ne dépasse pas le réseau des relations avec lesquelles il a tissé le monde sensible; il ne répond pas pour les choses, il ne répond que pour lui-même; la sensation, dont l'origine est inconnue, ne peut être enchaînée par les constructions de la conscience déterminante. ... Ainsi,

à l'intérieur du système du monde, nous sommes impuissants à légiférer pour la sensation, nous ne pouvons lui imposer la régularité que le principe du déterminisme, facteur essentiel de la constitution de l'expérience dans le système de Kant, paraîtrait exiger; . . . nous ne savons pas si le divers se laissera ordonner, c'est-à-dire s'il sera possible dans tous les cas de faire correspondre à l'*Empfindung* ce que nous appelons un objet; la conception kantienne ne confère donc pas à la science une garantie de certitude mais uniquement une garantie de conformité aux exigences de la conscience constructive dont elle est le produit. [Pp. 475-476.]

The book ends with a recognition of the frustrations incident to human finitude.

. . . le Kantisme a permis à l'homme de prendre conscience de son indigence au sein même de sa puissance, il lui a rendu manifeste la vanité de la Sagesse. . . . Il a fait apparaître une inadéquation définitive entre la volonté d'aspiration et la volonté de création; aux yeux de la réflexion philosophique la science a perdu l'intérêt religieux qu'elle avait revêtu antérieurement quand on lui donnait comme but de résoudre l'énigme et de pénétrer le mystère; l'homme sait qu'il n'y retrouvera jamais que lui-même s'y exprimant de façons diverses, qu'il n'y apprendra jamais que le degré de son habileté, et cet idéal ne lui suffit pas. [P. 478.]

I can not attempt in this short review to discuss the author's innumerable analyses and arguments, but I should like to record briefly certain general impressions. The general method of procedure, the scholarly handling of the texts, and the book's excellent documentation (there are full subject and author indices, and a valuable index of the Kantian texts quoted or referred to) deserve nothing but praise. The author's mastery of French and German criticism makes his complete neglect of English criticism somewhat surprising. There is much in the book's central thesis which I find plausible. Kant may indeed, it seems to me, be interpreted as insisting, above all else, on the reality of a creative experience, centering in a self which is transcendental at its core and is a conscious and active process in its essence, and on the folly of attempting to give a complete metaphysical account of reality as a whole. I can not, however, agree with the evaluation of the realistic passages in Kant; the author's own admissions regarding the unknown source and uncontrollable aspect of primary sensory data would seem to invalidate his subjectivistic account of the objective element in experience. Nor can I see why the self should gain so immeasurably from the autonomy which the author finds Kant attributing to it, or why its spiritual value would be impoverished rather than enriched in a more objective idealism.¹ And why, in view of the great impor-

¹ Several additional questions concerning the idealism ascribed to Kant seem to call for fuller discussion. What, for example, are the metaphysical and epistemological relations of finite selves to one another? What is the ultimate status of the self's ideals which constitute its "object," and of such timeless entities as the circle? Does Kant suggest no answer to these questions?

tance given to the self and the characterization of it as "personal" and "spiritual," does the author so completely ignore the light which is thrown upon man's spiritual life in Kant's ethical, esthetic, and religious writings? It is to be hoped that M. Lachière-Rey proposes to consider the normative content of the self in a subsequent volume. Finally, I was surprised to find no reference whatever to the post-Kantian idealistic philosophy, not even to Fichte. But it would be ungracious to emphasize what seem to me to be the book's limitations rather than its many excellencies. The latter should certainly recommend it strongly to students of Kant.

THEODORE M. GREENE.

PRINCETON UNIVERSITY.

JOURNALS AND NEW BOOKS

Logos. Band XXII, Heft 2. Festgabe zu Heinrich Rickerts zum 70. Geburtstag. Goethes geistige Gestalt: *Bruno Bauch*. Der autoritäre Staat: *Julius Binder*. Geschichte, Staat und Gegenwart: *Friedrich Meinecke*. Die Individualität des Gewissens und der Staat: *Eduard Spranger*. Puristische und fragmentarische Kunstkritik: *Karl Vossler*. "Kunstgeschichtliche Grundbegriffe." Eine Revision: *Heinrich Wölfflin*.

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Rideau, Émile: *Les Rapports de la Matière et de l'Esprit dans le Bergsonisme*. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1932. xi + 183 pp. 20 fr.

NOTES AND NEWS

NOTE CONCERNING MANY-VALUED LOGICAL SYSTEMS.

In Chapter VII of Lewis and Langford, *Symbolic Logic*, in the discussion of multiply-valued matrix systems, and of a three-valued system in particular, reference is made throughout to "Łukasiewicz and Tarski." It would have been more appropriate if such references had been to Professor Łukasiewicz alone, with an accompanying explanatory footnote.

Professor Łukasiewicz is sole author of these systems, having originated the three-valued system in 1920, and n -valued systems in 1922.¹ The matrices determining the systems, the original definitions of their fundamental ideas, and the philosophic interpretation of them are exclusively his.

In 1921, Dr. Tarski contributed the definition of the modal function *Mp*, which appears in the three-valued system as sketched in *Symbolic Logic*. This definition is adopted by Professor Łukasiewicz, as he notes, in place of his own earlier and more complex one, which is somewhat narrower in meaning.² The collaboration of Dr. Tarski in the further development of these systems—on the methodological side—is also indicated in the published papers.³

The same correction applies also to references in my article on "Alternative Systems of Logic" in *The Monist* for October, 1932.

C. I. LEWIS.

HARVARD UNIVERSITY.

¹ See J. Łukasiewicz and A. Tarski, "Untersuchungen über den Aussagenkalkül," *C. R. cl. Soc. d. Sc. et d. Let. de Varsovie*, XXIII (1930), Classe III, p. 10, footnote 17.

² See J. Łukasiewicz, "Philosophische Bemerkungen zu mehrwertigen Systemen des Aussagenkalküls," *ibid.*, pp. 65 ff.

³ See "Philosophische Bemerkungen . . .," p. 74, and "Untersuchungen . . .," pp. 11 ff.

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CHARLES PEIRCE'S GUESSES AT THE RIDDLE¹

WITH the publication of his *Collected Papers* by Harvard University a measure of justice is being done to Charles Peirce, long neglected except by a select few students. Unfortunately, the handsome volumes of this edition can not undo the damage which both Peirce and philosophy have suffered when he was not permitted, except for a brief period, to receive the intellectual and literary discipline which regular university teaching would have given him. His was an erratic temperament, as his writings amply testify. His conception of philosophy was architectonic, and he tried to write it in a grand manner; but most of the hitherto unpublished material which has appeared thus far is obscure, uneven in quality, and, in spite of the best efforts of his editors, unsystematic. As he himself remarked in 1903, "All that you can find in print of my work on logic are simply scattered outcroppings here and there of a rich vein which remains unpublished. Most of it I suppose has been written down; but no human being could ever put together the fragments. I could not myself do so." It is not surprising, therefore, that the writings in these first two volumes which are best from the point of view of clarity, consistency, and organization, are the articles published during his own lifetime.

Until all the ten volumes will have been published it is impossible to evaluate adequately even the first two. Their contents will suggest, to any one familiar with the literature of the last quarter-century, many of the central ideas of better-known writers. It is easy to find something of Husserl, Whitehead, Santayana, Wittgenstein and the logical positivists, Hilbert, Brouwer, and others, in the hints thrown out by Peirce, but left undeveloped. But whether these "anticipations" can legitimately be read *out* of Peirce, instead of read *into* him, only the later volumes will perhaps definitely decide. It is not impossible that he may become everything to all men, and that rationalists and empiricists, naturalists and idealists, realists and nominalists, may all read him for support as well as

¹ A review of *Collected Papers of Charles Saunders Peirce*. Edited by Charles Hartshorne and Paul Weiss. Cambridge: Harvard University Press. Vol. I, 1931. Pp. xvi + 393. Vol. II, 1932. Pp. xii + 535.

stimulation. Peirce was often his own audience,² and he could afford to be voluminous, repetitious, sketchy, and obscurely subtle. But to others it is not always evident what value much of his analysis has for clarifying problems of philosophy or science. His reader gets an impression of someone packing and preparing for an important tour, but who somehow never crosses the gates of his own familiar city: we are shown the itinerary and given glowing promises of what is in store for us, but alas! too frequently the manuscript breaks off just before the train is scheduled to leave.

Not even a complete summary can be given, in brief compass, of the contents of these volumes. This review must confine itself to a statement of just three important themes, and the interested reader must be left to examine at first hand many of the interesting variations which Peirce embroiders upon them.

I

The Peirce who is familiar to readers of his published writings is usually the mathematical logician and student of scientific method. But his scientific interests seem to have been subordinate to a far-flung metaphysics, and the substantial part of Volume I is devoted to an analysis and a speculative use of the categories. He desired to draw up a list of fundamental categories such that for a long future the intellectual achievements of man would appear simply as corroborative details, and one of his earliest published papers was already concerned with this task. Unfortunately, Peirce had a fondness for trichotomous divisions, and so he recognized just three fundamental categories: Firstness, Secondness, and Thirdness. But Secondness is analyzable into two species, the second of which is again divisible into two species, and so on; while Thirdness is analyzable into three kinds, the second of which is divisible into two varieties, and so on, and the third of which is divisible into three varieties, etc. His thought appears in a very artificial form indeed, although he had enough sense of humor to see how crack-brained his triadic scheme must appear to the general reader (1.364).³

Peirce has not definitely stated what status he assigns to the categories. But they are frequently proposed as the directly apprehended logical simples into which the complexity of whatever is presented may be analyzed. For his object is to establish a science of phaneroscopy (phenomenology) which would describe the total of whatever is present to the mind in any way (phaneron), irrespective

² He supplied one manuscript with the following heading: "Notes for a Book, to be entitled 'A Guess at the Riddle,' with a Vignette of the Sphynx below the Title. And this book, if ever written, as it soon will be if I am in a situation to do it, will be one of the births of time."

³ The references are to volume and paragraph.

of the "realities" to which the phaneron correspond or of their physical and psychological conditions (1.287).⁴ Now the study of the phaneron, Peirce claims, shows it to contain three indecomposable elements or aspects, which are the three categories. But he was careful to point out that these elements are not *existentially separate*, and that their analysis consists only in tracing out the relations between features isolated logically (1.294). The elements of the phaneron are indecomposable, because they show no differences in internal logical structure, although there are differences in the structure of their possible compounds (1.288, 1.291). The categories seem to be, therefore, factors continually present in all experience (1.134), and indissolubly intertwined with one another. We may *distinguish* the factors from one another, but we can not, even in imagination, *dissociate* them from one another or from other conceptions. We may indeed *prescind* or *suppose* some from the others in the same way as we prescind or suppose space from color (1.353); but we must never regard them as atoms out of which anything is constructed, since they are always only distinctions in everything presented (1.286).

Although the categories primarily characterize the phaneron, Peirce also regards them as representing congenital tendencies of the mind, and admits that so far he agrees with Kant. But he makes a careful study of the facts in various fields in order to confirm the pervasiveness of three modes of being (1.374); for he regards the list of categories as "a table of conceptions drawn from the logical analysis of thought and regarded as applicable to being" (1.300). It is difficult to evaluate his performance, since the analogies he finds between features in different subject-matters are very tenuous, the argument is often *post hoc*, and he himself points out in one case at least that the categories he finds in one domain do not correspond precisely with those in another (1.452). He uses (and thereby abuses) propositions in the general theory of conics to illustrate fundamental metaphysical distinctions, and the outcome is very mystifying metaphysics indeed (1.362). Finally, it must be remembered that Peirce admits his triad of categories does not exhaust all the categories (1.525), so that there is reason to suppose that his predilection for trichotomies was nurtured by his studies in the logic of relations; although what the intimate connection is between these studies and his metaphysics Peirce leaves the reader to guess at random.

⁴ This approach has many obvious affiliations with the "presuppositionless" studies of essences by Descartes, Husserl, and Santayana, although in the light of Peirce's devastating critique of the Augustinian-Cartesian philosophy in his earliest papers, too much can not be made of this similarity. And after the nature of Thirdness has been discussed it will be seen how full of presuppositions Peirce's analysis really is.

Let us turn to the categories themselves. The Category of Firstness indicates the aspect of freshness, life, freedom, variety, and spontaneity in the phaneron. Thus it would seem that Firstness presents the phase of atomicity, specificity, or sheer quality in experience. A quality is just what it is, and in its sheer immediacy is utterly disconnected with any other quality. On the other hand Peirce regards Firstness as a "pure nature" or quality to which embodiment and localization are essentially foreign (1.303). A quality is eternal, independent of time or of any realization (1.420); it is simply a "may-be," whose nature is that it *might* be a specific moment in a phaneron. Nevertheless Firstness is not a general or universal, since to be a universal involves reference to embodiment and localization (1.304).

It is not easy to reconcile these various characterizations of Firstness. Peirce seems to shuttle back and forth between regarding Firstness as the absolutely specific, immediate quality in the phaneron, as a determination which is not an "abstract suchness" (1.303, 1.306) on the one hand; and on the other hand, regarding Firstness as pure potentials, involving a variety and spontaneity which "is not definitely there," mere "may-bes" not necessarily realized (1.373). He thus alternates between conceiving Firstness as being simply a distinction within the phaneron, and conceiving it as a disembodied but substantial essence. Firstness is at the same time a mere "possibility" and the element of spontaneity; it is declared to lack generality, and also to be of the nature of a general, capable of further determinations (1.447). Peirce himself acknowledged that "possibility" was a misnomer for firstness, since it mistakenly suggested a relation to what exists (1.531). But he adds a final touch to these confusions when he identifies Firstness or quality, not with immediate, physically inefficacious quality, nor with an abstract isolated possibility, but with the *power* bodies have of determining future manifestations of inefficacious qualities (1.422). Firstness is then conceived as a dynamic relation, and so an element of law or regularity (Thirdness) is introduced into what started out to be the element of spontaneity.

Further difficulties arise when the connection of qualities with feelings is examined. A feeling for Peirce is an element of immediate consciousness, a quality of it which is not an event (1.306); and a quality in general is something which is vivid and conscious (1.357). There is thus a tendency to identify qualities with feelings, and so it is only a short step to impute feelings to whatever has qualities, for example, to inorganic matter. Indeed, "dead matter" can excite feelings in us, only because dead matter isn't dead at all (1.311). Consequently, Peirce must be included among those who

use with abandon an uncritically formulated principle of continuity. Like can come only from the like, and so the qualities which humans enjoy are communicable and find their counterparts in non-human situations. "I am confident," Peirce declares, "that a bull and I feel much alike at the sight of a red rag" (1.314). Far be it from me to question this assertion, especially since I do not know what it means. I do not see, however, how it and similar statements are reconcilable with Peirce's logical pragmatism. He himself declared that in immediate experience there is no *knowledge*, so that if Firstness indicates the element of spontaneity, every description must be false to it (1.357). And I think this is true, because of that which is wholly immediate nothing whatsoever can be said, for the simple reason that the wholly immediate is not the subject-matter for any saying.

We turn to the second category. Secondness indicates the element of brute fact, struggle, actuality. It points to fact, within which distinct elements stand in opposition to one another, for all existence is always a matter of blind force. Facts are determinate with respect to every character. They involve physical things acting upon one another *hic et nunc*; these physical things are the sum of all the consequences of their so acting here and now. But Peirce points out that the individual mode of behavior indicated by Secondness is not *determined* by any law (1.440); a stone falling here and now is not *made* to do so by any law of nature (1.323). Hence the proposition that every event is precisely determined must be abandoned, since it is only approximately true (1.402).

Secondness thus points to the element of contingency, of something "accidentally actual" in the phaneron (1.427). Peirce would have been sympathetic with recent attempts to revive causality as a distinct category not analyzable into uniform succession (1.325). For Secondness denotes a necessity which is natural, and also unconditional, forceful, ultimate, a quality of operative events. At the same time, Secondness points to a radical indeterminism in the behavior of nature, so that Peirce anticipated in general outline the statistical interpretation of natural laws.

Unfortunately, but perhaps inevitably, Peirce's discussion of Secondness is almost entirely in anthropomorphic language. We may cite as examples his characterization of fact as something which "fights its way into existence; for it exists by virtue of the oppositions which it involves" (1.432); and "the existence of facts consists in fight" (1.435). This anthropomorphism Peirce often regards as a virtue, and once again a principle of continuity is employed to read strife, struggle, effort, which are features of human life, as generic traits of all nature. But where shall one draw the line—why not

read desire, revulsion, love, into every nook and cranny of the world as well? Peirce, like many contemporary thinkers, did not hesitate at times to draw just such conclusions. Now the world may, indeed, be populated with many more qualities than we ordinarily suppose. But why should we uncritically admit them, at the behest of a dubiously stated principle of continuity? Why should we overlook the fact that the qualities we experience are functions, in part at least, of the interaction of our own bodies with the rest of nature, and that they can not therefore be imputed to segments of the world where such interaction is not going on?

An equally serious shortcoming is Peirce's failure to analyze the meaning of contingency, and to state how he conceives an event to exhibit a contingent aspect and also to illustrate a uniformity. Is the contingency of an event an absolute character of it, an immediate quality of a *hic et nunc* operation; is it a relational character, so that an event has a contingent aspect with respect to one set of circumstances but not to another set; is it synonymous with the sheer plurality and variety of things; or is it all these things and something else besides? This problem is especially important for Peirce, because as we shall see, uniformity is taken by him as a temporally derivative character of events.

Let us examine the final category. The category of Thirdness introduces the element of determination by law. A law is the mode of being which consists in *future* facts (of Secondness) taking on determinate general characters (1.26); a law is how an endless future must continue to be (1.536). Thus, Thirdness involves the idea of something general, which can not ever be completely actualized and so refers to an indefinite future. Thirdness or law, according to Peirce, is akin to thought; it can be produced and grow, it can be communicated and is general. It addresses itself to two realms: as general, it concerns itself with the realm of possibility or quality; as factual, it refers to the actual world (1.420). Since Thirdness is involved in all communication, the correct analysis of the category leads inevitably to the study of the nature of signs. But we will examine this aspect of the matter in the next section.

At this point, let us see the use Peirce makes of his categories in his cosmogonical speculations. According to him, every sound metaphysics must be evolutionary. This dictum is based largely on the further dictum that what needs to be explained is not the variety, freshness, and unpredictability of things, but the uniformities which they exhibit. Uniformity must be "explained" by showing how, out of a primal spontaneity, together with a *tendency* in the flux to take on habits, laws or habits have *evolved* (1.175). In a sense,

therefore, Thirdness is not as "ultimate" a category as Firstness, since regularity grows out of pure chance or Firstness (1.407). In the infinitely distant past there was no law, only chaos together with a tendency toward uniformity or the elimination of indeterminacy (1.409). Hence the three active elements in the universe are chance, law, and the tendency for things to take on habits.

Is it possible to make a coherent scheme out of all this? In the first place, let us recall that the categories should be regarded as *distinctions* within the phaneron, not as active elements out of which whatever exists is to be constructed. However, if we also recall that phaneroscopy has nothing to do with the question of how far the phaneron corresponds to any reality, what meaning shall we assign to Secondness and Thirdness which specifically involve reference to the actual world? Can anyone, least of all Peirce, maintain that the nature of law is to be learned independently of the operations of "real" beings and of the use of the discursive methods of the sciences? Indeed, if there is nothing in immediate consciousness except feeling or quality (1.317), how can the phaneron exhibit elements of Secondness and Thirdness? Peirce himself declares that law unrealized is merely a pure first, a quality possessed, and is not a "genuine" law.

Secondly, is the idea of law as something active anything other than Plotinian and Schellingian poetry? It is true that Peirce calls Thirdness a law only when we contemplate it from the outside, while if "we see both sides" it shows itself to be akin to thought (1.420). But change of terminology does not always solve a difficulty, and Peirce does not show how the radical indeterminacy of fact is compatible with the *activity* of thought or law in determining what future facts are to be.

Thirdly, what is to be said for the dictum that uniformities, and only uniformities, require explanation? Is it not patent that we sometimes seek to explain a regularity and at other times the lack of regularity? For what, anyway, is an explanation? Is it not the case that we "explain" an event or law when we exhibit it as an element in a more comprehensive order or uniformity? Thus we explain why a glass breaks when hot water is poured into it, by showing that *types* of relations, like the flow of heat, the elasticity of a substance, and the unequal expansion of a substance, are exhibited in the explicandum. These types, if they are to explain, must be pervasive modes of behavior, must be what are called "regularities." Peirce himself is compelled to take note of them. He can not possibly get order and connection by simply taking them as *growths* from a primal chaos; he must take for granted some form of order, e.g., a tendency in things to take on and conserve

habits. For the hypothetical chaos is completely unintelligible, and can not be the explanation of anything. One may explain a specific law by showing it to be the consequence of a more inclusive order. But one can not explain order as such, since it is the principle of explanation of everything else. What order we take as primary in any inquiry depends upon the state of our knowledge and the demands of the problem; *some* order we *must* assume, just as *some* plurality *must* be taken for granted if anything is to be explained. Peirce was motivated in his cosmogony by a bias toward a spiritualistic interpretation of the cosmos, and by an understandable reaction to philosophies of his day which attempted to derive the variety of things from a primal homogeneity. The moral is that it is just as much a mistake to deny an ultimate specificity and variety, as it is to deny an inexpugnable order. It is instructive to compare Peirce with Spinoza. Both recognized nature to possess a structure and also to contain an inexhaustible variety. Peirce chose to emphasize the latter and to regard the former as derivative. But I think Spinoza was both sounder and wiser when he included in Part I of the *Ethics* Prop. 15 as well as Prop. 28.

Finally, one must seriously question Peirce's facile reduction of laws of nature to "habits." No doubt there is an analogy, often a fruitful one, and no suggestive hypothesis should be neglected. But do we know the nature of human habits so well that we can pretend to throw light on the nature of laws by using the former to explain the latter? What real evidence is there for Peirce's assumption that natural laws are like habits which human beings take on and occasionally drop? It is true that almost all our scientific terms, even the most neutral ones, are infected with meanings carried over from the specifically human scene. But this should not be taken as a license to exercise one's speculative fancy and so regard processes in all parts of nature as simply human processes writ large. The issue is not between affirming immutable laws of nature and affirming the contrary. The flux is what it is, and why should a naturalist on *a priori* grounds deny anything of it? But whatever the flux is, the issue is to examine any allegation concerning it with scrupulous care, in philosophy as well as in science. And if it is alleged that laws grow and change, while at the same time laws are not identified with any segment of the flux, especial care should be taken to determine the sense in which laws "change," considering that change is taken as a fundamental character of the flux itself.

II

Although the triad of categories is a persistent melody running through most of Peirce's writings, many of his doctrines can be

understood better in connection with his theory of signs. The magnificent series of papers in the *Journal of Speculative Philosophy*, in which he broke with the Cartesian tradition dominating modern philosophy, was inspired by his recognition of the function of signs in thought. Like Aristotle, Peirce was impressed by the fact that language is the medium in which the rationality of the world becomes expressed and communicated; and he went so far as to say that "the woof and warp of all thought and all research is symbols, and the life of thought and science is the life inherent in symbols" (2.220). "My language," he declared, "is the sum total of myself, for the man is the thought. The identity of man consists in the consistency of what he does and thinks, and consistency is the intellectual character of a thing, i.e., is its *expressing* something." Representation or the operation of signs (mediation or Thirdness) is therefore one of the fundamental categories, and to its study Peirce devoted his best energy.

Peirce's ideas on signs are the most difficult and obscure of all he set down on paper. Only a meager outline is here attempted. Anything whatsoever (e.g., physical object, image, quality, thought) may be a sign, so that signs differ from one another in several important ways. But in any case, every sign involves a triadic relation. For in every case where a sign functions, there is first, the sign with its own material quality; secondly, there is the object of which it is a sign, and which it represents in some respect (the *ground*); and thirdly, there is the thought to which it is addressed, the interpretant to which it is a sign. In Volume II Peirce discusses each one of these three aspects of the sign, each aspect yielding three divisions.⁵

And first, when we attend to the material quality of signs, we find three types: a sign may be a pure quality or possibility, something which as a pure quality is disembodied, even though it can not actually function as a sign until embodied (a *qualisign*); or it may be an actual existent, a physical thing or event (a *sinsign*); or finally, it may be a general law, rule, or habit (a *legisign*). Every *sinsign* clearly must involve *qualisigns*, while every *legisign* functions through *sinsigns* which are instances or "replicas" of it. Thus, in one sense, each time "three" occurs on a page there is a distinct word, each being a *sinsign*; but in another sense, these distinct *sinsigns* stand for the very same word (*legisign*), which is a general rule or convention for the production of *sinsigns*. All conventional marks are signs not because they can be seen or touched, but because they are replicas of a type which signifies through its instances (2.244).

⁵ In a later volume he will distinguish ten trichotomous divisions, giving sixty-six independent classes of signs.

Secondly, when the sign is studied with respect to the relation between it and its object, the following three types are found: a sign is an *icon* when it refers to an object because of its own intrinsic features, which nevertheless it possesses in common with its object (e.g., a diagram or picture); it is an *index* when it is really (dynamically) affected by its object (e.g., a street cry, the rolling gait of a man as a sign of his being a sailor, or a weather-cock); it is a *symbol*, when it operates to be interpreted by virtue of a law or association of general ideas (e.g., a proposition, all conventional signs). Peirce regarded this as the most important division of signs. The only way we have of communicating and thinking, according to him, is by means of direct or indirect use of icons (2.278). But icons generally function as constituents of indices, which in turn are constituents of symbols; and symbols, being general, involve laws referring to the indefinite future, and so require legi-signs and sinsigns to function (2.293).

Thirdly, when the sign is examined with respect to what its interpretant understands it to represent, the following three types are found: when the sign is taken as representing a kind of *possible* object or quality, when it represents an object merely with respect to its characters, it is a *rheme* (in modern terminology, a propositional function); when it is taken as a sign of actual existence, when it represents its objects with respect to the actual existence of the object, it is a *dicisign*; when it is taken as a sign of law or regularity, it is an *argument* (2.252).

If we combine these three sets of distinctions in all possible ways, we get twenty-seven (i.e., 3^3) classes of signs, only ten of which are independent. Peirce discusses them with great subtlety. We can not report his analyses, but turn instead to some of the applications he makes of his studies on the rôle of signs in discursive reasoning.

(a) *The nature of meaning.* It is not intended to add here another specimen to the sixteen meanings of "meaning" captured by Ogden and Richards. I only wish to point out that most analyses of meaning have gone off the track because they identify meaning with some essence, image, or thought, instead of studying the structure of the situations in which meanings occur. Peirce's discussion of signs should make us aware that "meaning" is a triadic relation involving a sign, its object, and its interpreter, so that an exclusive concentration upon one of these terms must of necessity yield an inadequate analysis of the nature of meaning. It may be thought that the specific introduction of the interpreter as a factor in the analysis of meaning, involves the introduction of irrelevant psychology which will only becloud a very beclouded problem. But quite the contrary is the case. For this analysis isolates the differ-

ent factors in a meaning situation, allows us to explore the general conditions under which signs may adequately represent their objects irrespective of any specific interpreter, and then emphasizes the ineradicable rôle of the interpreter. Thus we can discover that a sign must be a "logical map" or icon of its object if it is to represent it adequately; and we can also consider the social factors which enter into the activities of the interpreter which determine how he interprets signs, without however altering the validity of the first analysis. Meanings are not qualities or essences; they are the structure of certain situations in which such triadic relations are exhibited.

Consider, furthermore, the problem as to the nature of propositions. A proposition is sometimes identified with judgment, understood as a psychological act; sometimes with a fact or state of affairs; sometimes with a substantial, non-temporal, non-spatial entity or essence; sometimes with a sentence in all its particularity. Peirce, on the other hand, is able to avoid both the hypostasis and the psychologizing of propositions by analyzing them as *dicent symbols which are legisigns*. Hence a proposition is a sign, and requires a three-fold reference: it is a sign which is connected with its object by an association of general ideas; it is dynamically connected with its object if it is true, and is *interpreted* as representing a situation *located* in the realm investigated; and it also has a determinate material quality, determined by a general rule or convention, so that "*cogito*" and "I think" stand for the same proposition.

It is also relevant to mention in this connection that most of the recent work in symbolic logic has devoted exclusive attention to the *iconic* feature of signs, and has neglected their very important *indexical*, *symbolical*, and *argumentative* aspects. The dissatisfaction which many philosophers have felt with symbolic logic may perhaps be explained on this ground. And it is not too much to say that an adequate philosophy of logic will not be achieved until the neglected features of signs receive a complete study.

(b) *The doctrine of fallibilism*. Every sign addresses itself to some thought or interpreter, and this in turn, according to Peirce, is a sign, which must address itself to another thought, and so on without limit. This indicates the nature of all discursive thought, and it is largely for this reason that he denied knowledge to be immediate apprehension. All cognition requires mediation, interpretation, and reference to an indefinite future. There can be no absolute finality or complete certitude, since the process of interpretation is an unlimited one. The method of science is self-corrective. We can not doubt all things at once; but without being

dogmatic or sceptical, we can construct hypotheses, submit them to empirical tests, reconsider the hypotheses and tests in terms of other hypotheses and observations, and so on endlessly. Thus while the sciences aim at exactitude, universality, and complete certitude, these are ideal limits which they can never reach, and which it is suicidal for them to claim to have reached. All our knowledge, in the natural sciences as well as in mathematics, is fallible.

The import of this doctrine will be clearer if we bear in mind that the complete certitude Peirce denies we can attain, is *not* a psychological state of strong conviction, but is a complete *logical* ground for the propositions we assert. The following considerations will bear this out.

(1) Peirce makes clear that it is the fallibility of *discursive thought* which he is asserting, and that he is not denying the immediacy of direct experience. Kant's sharp distinction between observation and reflection he believes is mistaken, because all significant observation involves interpretation, so that reasoning does *not* begin *after* observation is over (1.135). The consequences of this criticism, as everyone knows, are momentous for the theory of science. And he has a crushing retort to those who claim absolute certainty for the objects of direct experience: "Direct experience is neither certain nor uncertain, because it affirms nothing—it just is. . . . It involves no error, because it testifies to nothing but its own appearance. For the same reason, it affords no certainty" (1.145).

(2) The claim to infallibility is only a hindrance to inquiry, since what we want to know concerning any proposition is whether it is well supported by evidence. The claim to finality, however, confuses the question of the logical value of the evidence with the question as to the psychological certitude we may possess. Accordingly, since the first rule of reason is "Do not block the way of inquiry" (1.135), we may dismiss as obstacles the claims that we have absolute certitude, that there is something we can never know, that something or other is basic or absolutely simple, and that some law or other has received its perfect formulation.

(3) It is a very crude analysis which declares that things are sharply cut off from one another, like the traditional pictures of atoms as billiard balls. The contrary is the case, according to Peirce, for "all things swim in continua." Our concepts, too, shade off into penumbral regions of indeterminacy, so that our knowledge "swims in a continuum of uncertainty and indeterminacy" (1.171). Hence the "laws of nature" must be interpreted as describing the approximate behavior of large groups, and do not describe without serious qualifications the behavior of their individual members (1.156).

(4) A pragmatic theory of meaning involves an implicit reference to the future in every judgment about matters of fact. To call a piece of stone *hard*, is to *predict* how it will behave and what effects it will have in the future (1.615). Hence every present judgment is subject to correction, since it involves an endless series of verifications. Science is therefore not so much a body of established truth, as a diligent *search* or *process of inquiry* into truth (1.44).

Against the doctrine of fallibilism many thinkers will no doubt raise the objection that we can not be said to "know," unless what we know is in fact the case. Anyone claiming to "know" that the earth is flat, it will be said, claims what is false, for we could *know* that proposition to be true only if the earth were indeed flat. Hence, if there is such a thing as knowledge, it must be absolutely certain; on Peirce's view, however, it will be urged, we may have opinion and belief, but never authentic knowledge, since knowledge is not subject to revision. To this objection there is only one reply. Knowledge so defined that when we have it we can not possibly be in error, is the ideal goal to which we strive; but it is Peirce's claim that we have not yet anything to illustrate such a knowledge beyond every possible doubt. It may well be that certain propositions claimed as knowledge will never be significantly challenged. The indubility that attaches to such propositions comes, however, not from any analysis of the nature of knowledge nor from a psychological sense of certitude, but from the fact that they are supported by evidence overwhelming logically. Nevertheless, in all discursive thinking there is always the possibility that we are mistaken in what we allege to know. There are therefore no ultimate first principles intuitively reached which are the bed-rock of all certitude. There is only science as a self-corrective process, steering midway between a stultifying scepticism and an unimaginative dogmatism.

(c) *Logic and mathematics*. But what does Peirce do with logic and mathematics, it will be asked. Can he successfully extend the principle of fallibilism to apply to them? The attempt to do so is indeed one of the most interesting features of Peirce's writings on logic; and it merits careful study because he was bitterly hostile to the psychologizing logicians of his day.

Logic in its broadest sense is understood by him to be general semeiotic, or the science of what must be and ought to be the nature of true representations or signs (1.444, 1.539). Logic is thus inextricably related to language. Corresponding to the three-fold nature of signs, it has three departments: *critical logic*, the theory of the conditions for the *truth* of signs; *speculative grammar*, the theory of the nature of signs in all their aspects; and *speculative*

rhetoric, or the theory of the conditions of reference of signs to their interpretants (2.93). The content of speculative grammar has already been indicated; and apparently Peirce wrote nothing systematically on speculative rhetoric, in spite of his belief that general methods could be stated for attacking the solution of problems (2.108). There remains to indicate something concerning the nature of critical logic.

The task of critical logic is the classification of arguments with respect to the form of their constituent propositions and the frequency with which true premisses of a determinate type yield true conclusions. Each argument requires a *habit* of inference, which when formulated is the leading principle or canon of that *type* of argument. These habits are *general* since they refer to an indefinite future, and in a determinate class of arguments commit us to few or no false conclusions (2.148, 2.446). Some leading principles are perfectly general or formal: they are involved in every set of premisses, and are the logical principles *par excellence*; others have a more restricted generality, and are material principles (2.466, 2.589).

The consequences of taking leading principles or generalized habits as the basis for valid inference are many. It enables Peirce to supply an objective, matter-of-fact foundation for all inference, and so indicate the relevance of material considerations in formal logic. The naturalistic strain in him shows itself at its best in his discussions of the metaphysical grounds of logical canons of inference (2.710 ff). It also enables him to treat in a unified manner both necessary and probable reasoning, since the former is a limiting case of the latter when the leading principles employed have relative truth-frequencies whose values are always unity (2.696). It permits him to do justice to the purely mechanical element in inference, and admit that logical machines perform inferences even though they do not think (2.59). And it permits him to avoid a crude empiricism with respect to logic, by associating the canons of deductive or explicative inference with the analysis of *signs*, so that he can retain his naturalism and still admit that the experiential element in logic is all but nil (2.65).

Nevertheless, not everything that Peirce says about inference is crystal clear or consistent. There remains an unbridgeable gap between probable and necessary reasoning which he reluctantly admits when he asserts that a class of arguments whose relative truth-frequency is unity, does not *therefore* belong to the class of necessary inferences (2.369). And when he asserts that the process of substitution, so vital in formal reasoning, is non-inferential, simply because the propositional forms employed have no *specific*

meaning or reference, he exhibits serious limitations in his understanding of the distinctive marks of inference (2.496).

Let us turn, however, to his analysis of deductive reasoning and to the incidence of the doctrine of fallibilism upon it. We can best do this in connection with his discussion of mathematical reasoning. Peirce was profoundly influenced by F. A. Lange's *Logische Studien* and always maintained that both logic and mathematics were "observational sciences." This *aperçu* depends on recognizing that all reasoning is by means of and upon signs. In mathematics, for example, we construct a diagram (i.e., any complex sign) according to a general rule; we observe relations between parts of the diagram not stated explicitly by the rule; we show that the diagram is a fair sample of all the diagrams determined by the rule, so that these relations hold always (or at least in a certain proportion of cases) for any such diagram; and finally we state these relations in general terms as the necessary (or probable) conclusion of the investigation⁶ (1.54, 1.66). In the sense, therefore, that explicative reasoning is diagrammatic, it requires observation, since we must construct diagrams, at least in imagination, and *observe* them (1.240); and it will be seen that the discussion does not depend on the status of the controversy between opponents and defenders of "imageless thinking." Hence, mathematics is no more infallible than other positive sciences of observation, and every mathematical inference is accordingly a matter of probability (1.248, 2.192) even though it may be beyond every reasonable doubt.

Whatever else may be said of this extension of the principle of fallibilism to mathematics, Peirce has rendered a service in pointing out how insecure logically are all claims for the self-evidence of mathematical propositions. The history of logic and mathematics amply bears out the substance of Peirce's warnings against an arrogant infallibilism; it shows that here as elsewhere, general principles are but slowly apprehended, require to be carefully tested out, and the limits of their application are never completely free from doubt. Nevertheless, there is a good deal of confusion in his contention that mathematical reasoning is "probable." His illustrations indicate that he means by that characterization simply that we, and thousands of others, may have blundered in adding a column of figures or in deducing the consequences of a set of premisses. But there is an important difference between the assertion that " $7 + 5 = 12$ " is only

⁶ In this emphasis upon the rôle of diagrams Peirce anticipated much of the mathematical philosophy of Hilbert, although his motivation is clearly different. Like Hilbert, he denies that mathematics ever requires the aid of logic (1.247, 2.191), although this dictum seems to depend upon his taking "logic" in this context to be a science of *fact*, and not the formal science of the consequences of hypotheses.

probable because *we* may have erred, and the assertion that "all men are mortal" is probable because the evidence from bio-chemistry and physiology is incomplete and because there is a reference to a contingent future. In the first case we are dealing with the connection of relations having the utmost generality possible and not subject to change; in the second, the subject-matter is a segment of an incompletely determined flux. And Peirce himself, as we shall see, stood out firmly against confusing probability with ignorance.

Peirce's views as to the nature of mathematics are amazingly up to date. He saw clearly that pure mathematics is a hypothetico-deductive science; that it does not make categorical assertions about what exists (1.53), and that all *a priori* arguments about matters of fact are just rubbish (2.137). But he did not always see the implications of these insights. Thus he thinks that "two straight lines can have only one intersection" is an evident proposition (1.130), and that the postulates of geometry are only approximately true (1.131). He can not therefore be regarded as having anticipated Poincaré and Duhem in their profound studies on the connection between applied mathematics and physics.

(d) *Nominalism*. It is clear from what precedes that Peirce could not agree with those for whom the only mode of being is that of individual objects which crowd out a place for themselves by sheer force. Such a view he characterized as nominalism, and he called himself a realist because he recognized the mode of being of law or Thirdness.

Peirce takes great pains to make clear that by a law or universal he did not mean a "thing" or a "particular." When a man believes that the property *hardness* is not invented by men as the word "hard" is, he says, "but is really and truly in the hard things and is one in them all, as a description of habit, disposition, or behavior, *then he is a realist*" (1.27n). The mode of being a law consists in the fact that future acts will take on a determinate general character. Whatever is general, is something which is the *object*, not the creature of thought. And it can not be identified with any finite set of particulars, since "its being is in the instances which it will determine" (2.249).

Peirce's realism is thus of the "moderate" kind. Universals or laws are not capable of localization in space and time, not something added to the particulars so localized. They are the modes of behavior and the relations between modes of behavior of things in space and time. In spite of his flirting with the idea of "pure possibilities," in spite of his saying that a typical mathematician must be a Platonist for whom the universe of "actual" existence is but an arbitrary locus in the eternal, the substance of his reflections on universals is

to tie them indissolubly to the flux of things. The supposition of universals with no reference to the flux is as meaningless as the supposition of a flux which did not embody universals (2.330).

But there is no doubt Peirce was not always faithful to his best insights into this matter. Most puzzling is his philandering with the idea of final causes, so that he sometimes thinks of laws and ideas as operative and efficient. Thus, he declares that when an idea is communicated "it had caused something to happen in your brain" (1.213); that while heredity is a law and not a force, it "like other laws doubtless avails itself of forces" (1.215); and that "every general idea has more or less power of working itself out into facts" (2.149). These expressions may be simply metaphors. It is, however, a metaphor which strangely persists in much of the discussion of Thirdness, and must make Peirce's readers question the integrity of his realism. For to endow laws with efficacy is to particularize them into things, and is an invitation to the nominalist to ask his unanswerable "When? Where?" Nor is the reader's doubt allayed when Peirce permits himself to say that the number system is our own creation, and that mathematical reasoning holds simply because it deals only with the creations of the mind (1.149, 2.192). It is a high price, even for fallibilism, to explain the unusual logical certainty of mathematics by regarding its subject-matter to be nothing more than an entertaining convention.

III

Peirce was justly proud of his having been brought up in the laboratory and of so having acquired the experimental frame of mind when still young. And indeed his best developed writings are the contributions to the theory of deduction and to the analysis of probable reasoning.

The substance of his discussions of scientific method centers around his perception that science is more sure of the correctness of the general procedures it employs than it is of any specific result achieved by them. Those procedures involve the specific application of a self-corrective hypothetico-deductive method, and Peirce was convinced of the universal applicability of that method. He was eager to defend it against all comers, like a knight his fair lady whom he has chosen from all the world. He could, therefore, consistently attack the positivists for their doctrine that all hypotheses must be capable of direct verification (2.511n), and also declare that the full meaning of a proposition is to be found in what it prescribes us to do to gain perceptual experience (2.330). Even without waiting for his complete writings on pragmatism, which will appear in later volumes, it is possible to form a fair estimate of the studies on scientific method contained in these volumes.

Peirce made much of the distinction between explicative and ampliative reasoning. Explicative reasoning is either *necessary* or *probable*, ampliative reasoning either *inductive* or *presumptive*. We have already considered the main features of the first, and shall return below to a more careful analysis of probable inferences. What is ampliative reasoning? In general, says Peirce, it is such that "the facts summed up in the conclusion are not among those stated in the premisses. They are different facts, as when one sees that the tide rises *m* times and concludes that it will rise the next time. These are the only inferences which increase our real knowledge, however useful the others may be" (2.680). But let us see what its species are.

Induction consists in inferring the constitution of a class from the constitution of samples drawn from it. We determine by induction the nature of a cargo of wheat through judicious sampling; this process determines for us, by empirical means, the ratio with which certain characters occur. *Presumptive reasoning*, on the other hand (also called abduction, retrodution, hypothesis), consists in inferring an explanation, cause, or hypothesis from some fact which can be taken as a consequence of the hypothesis. Presumptive reasoning is therefore the provisional adoption of a hypothesis, because every possible consequence of it is capable of verification, so that by pursuing this method its disagreements with facts will be revealed (1.68). The difference between induction and presumption is that the former infers the existence of phenomena homogeneous to those already observed, while in the latter something heterogeneous to that already observed is concluded, even something impossible for us to observe directly (2.640).

Now Peirce believes that these forms of inference are different from explicative probable reasoning, which he also calls statistical deduction. For the latter is probable, as we shall see more fully below, in the sense that though in a particular case its conclusion is false, yet in the long run and with a definite ratio, *similar* conclusions would be approximately true. But induction, for example, is probable only in the sense that though it may give a false conclusion, yet in the long run where the same process is used, a *different* but approximately true conclusion would be drawn (2.703). Thus, in probable reasoning the predicted conclusion is *verified* in the long run in a definite ratio of all the cases; in ampliative reasoning, the predicted conclusion will be *changed* in a good proportion of the cases, but will become approximately correct in the long run (2.709).

But it can be shown that the distinction between statistical deduction and the species of ampliative reasoning is only a *psychological*

one, and refers simply to the various degrees of completeness our knowledge may possess. The distinction does not touch the *logical* question as to the *validity* of these forms of inference. For consider: If we reason at all, we must reason from premisses, and if we reason validly we do so because the conclusion is obtained in accordance with the leading principle or canon of the argument. When Peirce asks how it is possible that a man can observe one fact and then pronounce judgment concerning another fact not involved in the first, and when he then adds that such reasoning has no definite probability (2.690), he is surely inconsistent with his own analysis. If the inference is made in virtue of some leading principle, it *does* have some degree of probability, namely, the relative truth-frequency associated with that principle. If the "inference" does not involve a leading principle, *no reasoning* takes place in any usual sense of the word. Thus, I sample a bag of beans and find half the sample is white. If I *know* nothing concerning the representative nature of the sample, I can *conclude* nothing about the color of the beans in the bag, although I may make a guess, consider my guess a hypothesis, and then proceed to test the hypothesis in the usual way. But if I *do* know that samples drawn in the way I drew this one *are* representative of the beans in the bag, I can conclude something about the constitution of the bag by statistical deduction; and the argument is probable in the sense to be defined presently. Ampliative inference is thus the experimental process by which we determine approximately the numerical values of the relative truth-frequencies involved. But as Peirce himself admits, its species are inverse forms of deductive probable inference, and their *validity* (the only relevant question in logic) is the validity of statistical deductions (2.511, 2.718).

We need discuss therefore only the theory of deductive probability, which Peirce adopted from Venn and developed in an original way.⁷ The following are its essential features: (1) Probable inference, like all inference, depends for its validity upon determinate relations between *propositions*. (2) No proposition is probable intrinsically, but only with respect to other propositions which are evidence for it. Probability is thus a *relation* between propositions. (3) Whether a proposition has or has not a degree of probability on definite evidence, does not depend on the state of mind of the person entertaining the proposition. Psychology is as little (or as much) relevant in probable inference as it is in necessary inference. (4) An inference is probable in so far as it belongs to a *class* of in-

⁷ A rigorously systematic discussion of the theory was never given by Peirce. It has been left for German students (Von Mises, Reichenbach, Tornier) to discover independently the fundamental principles of the truth-frequency theory.

ferences in which the frequency of the conclusions being true is a determinate ratio of the frequency of the premisses being true. Probability is the *limiting value* of the fraction whose numerator is the number of times both antecedent and consequent are true and whose denominator is the number of times the antecedent is true, as the number increases *without limit*. Hence probability is not, as on Keynes' view, an unanalyzable concept. (5) The same proposition may have different degrees of probability in accordance with the sort of evidence which is marshalled in its support. But the relevance of the evidence can not be determined on formal grounds alone.

It is clear that since probability is the limit of an endless series, we can never assert categorically the value of a probability. Hence the assertion that such and such is the probability of a proposition is always a *hypothesis*, always subject to correction. And hence, also, the sole business of the experimental sciences, since we can not exhaustively study all of nature, is to carry on *sampling operations* which will indicate approximately the values of different probabilities.

The question remains, therefore, under what conditions the process of sampling will lead us to an approximately true knowledge of the constitution of a field. Peirce prepares his reader by first rejecting *in toto* all theories of probability which are based upon the principle of equal distribution of ignorance; second (this is a corollary from the first) rejecting the use of inverse probabilities; and third, denying that the validity of sampling depends on any material assumptions such as the uniformity of nature (2.102, 2.749). According to him, sampling is a valid process whatever be the constitution of the universe, since its validity follows from the *manner in which the sampling is conducted*. And the following are the conditions under which sampling is a reliable process: first, the subject-matter must have a determinate nature; second, the sampling should be carried out without bias, the samples must be "fair"; and third, the characters whose distribution is investigated must be pre-designated or predicted prior to drawing a sample, if that sample is to serve as evidence for any hypothesis concerning the constitution of the field. And Peirce concludes that while in any given case the process may lead to false results, it will, if pursued far enough, approximate more and more closely to the truth.

Now it is true that the method of sampling Peirce discusses is, in general outlines, the one pursued in the sciences. But isn't Peirce claiming more for the method than is warranted? Thus, the assertion that if samples are drawn "fairly," i.e., without bias, they will ultimately yield a "fair," i.e., representative, sample of the constitution of a field, is either a bald tautology, or is a *material* assump-

tion to the effect that the specific mode of sampling is carried on in such a way that every variation in the field will turn up in our samples at some time or other. But if the amount of independent variety in the field should be indefinitely large (or even too large to handle with the methods at our disposal) we may never obtain representative samples no matter how, or how far, we carry on the process. *Some material* assumption, e.g., the existence of a limit in a rapidly converging series of variations, or the existence of a finite number of types or classes in nature, seems to be required if the process of "fair" sampling should yield representative ones. It is true that such a material assumption is itself a hypothesis, and must be evaluated in accordance with the usual canons. But this only goes to show that we can get *no absolute guarantee* in advance that any given method will work, no matter how trustworthy it may have shown itself to be.

I also can not escape the impression that in spite of Peirce's vehement denial of the principle of antecedent equiprobabilities, it returns to plague him. The process of sampling depends on the fact that more samples of a certain kind appear than others. But why do they? Because, the answer is, more samples of that kind occur in the field studied. But since samples not yet drawn exist only *potentially* in the field, it is legitimate to ask why there should be potentially more of one kind than of another. And the answer seems to be that if all the relevant characters in the field were combined in every permissible way, *and if all these permissible combinations were antecedently equally probable*, then there would be more of one kind than of another.

Because of the sharp distinction Peirce makes between induction and presumption, he tends to obscure the identity of the processes employed, say, in evaluating the constitution of a cargo of wheat and in determining the correctness of the theory of gravitation.⁸ This has as a consequence an unnecessary restriction of the frequency theory of probability, a restriction which is being removed by modern students. But already Royce showed that in evaluating a theory we are taking samples from all its logical consequences. There is therefore no good reason to doubt the universal applicability of the frequency theory of probability and the essential identity of scientific method in all departments of science.

IV

The editors of this edition deserve the congratulations of all students for their self-effacing and intelligent labor in bringing a sem-

⁸ He declares he had committed a fundamental error in his Johns Hopkins essay on "Probable Inference," but he does not state explicitly what the error is (2.102).

blance of order into a wilderness of manuscript. They have almost achieved what Peirce thought impossible for mortal man to do. Each volume has been supplied with very full indices, and in several cases with helpful explanatory notes. In the light of the enormity of the task and the excellence of the achievement, it may seem ungracious to find fault. But I think it is unfortunate that Peirce's larger manuscripts have been broken up and distributed throughout the volumes; this is especially true for the completed *Grand Logic*, the several chapters of the *Minute Logic*, and the *Lowell Lectures*. One may also question the judgment of the editors in neglecting to include in these early volumes certain outstanding papers to illustrate Peirce's doctrines: e.g., his review of Frazer's *Berkeley* for his views on nominalism, or his essay on the "Fixation of Belief" for his doctrine of fallibilism. Because of the topical arrangement of the papers, the historically interested reader will be able to estimate the extent to which Peirce's ideas underwent change only by a painful leafing of each volume. It is hoped the editors will manage to include a table in the final volume indicating where the component parts of the larger manuscripts are to be found, and possibly also the chronological sequence of the papers.

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BOOK REVIEWS

Studies in Philosophical Naturalism. H. G. TOWNSEND, editor.
Eugene, Oregon: University of Oregon Press. 1931. 60 pp.

Two features of these studies I find especially encouraging. The writers represent the departments of education, English, and history as well as philosophy, bringing diverse interests together in a philosophy seminar. Secondly, naturalism is intelligently approached as a necessary reflection of the scientific temper of our time rather than as a purely speculative enterprise; a genuine effort is made to understand it. Understanding is not easy because scientific method is now stressing reflective as much as observational and experimental verification. I might add that the growing admixture of philosophy in science, perhaps inevitable, is yet surely not an unmixed blessing at present either for science or for "scientific philosophies. Hence it is a pleasure to note that this inquiry is aware of the hypothetical and adventurous character of philosophic conclusions.

Most of these studies deal with one or another phase of Alexander's *Space, Time, and Deity*. I can only roughly indicate their contents. Charles D. Tenney, presumably a teacher of English,

writes on "The Romance of Emergence." He does not mean thus to bury the doctrine but rather to show its resemblance to the theories of the romanticists. Evidence for this resemblance is cited in the attention Alexander directs to the problems of individuality, evil, error, ignorance, progress, time, and deity. As to the more important matter of the motivation of the problems, instead of proving like motives, the writer shows historical dependencies, as in the statement, "The seed of democracy is the individualism of the romanticists." Such connections are doubtless important but the argument proves too much, leaving one to wonder how any subsequent philosophy can escape romanticism.

Next follows an exposition of "Alexander's Doctrine of Value as Emergent in Nature," by Ralph W. Leighton. The exposition is clear, sympathetic, and has broader significance in revealing considerable common ground between this and other theories of value of the pragmatic and idealistic type. Grace Smith's essay on "The Emergence of Individuality in the Philosophy of Alexander" broaches what many of Alexander's critics have regarded as his most vulnerable weakness. For the most part expository, the argument comes to the difficulty in the last paragraph, in noting that Space-Time as substantive, as absolute, seems to preclude an open future. It is suggested that perhaps the difficulty disappears in the fact that future events "are reducible without residue to mere spatio-temporality and in that sense are within the ultimate System." But the crucial point is whether future qualified events are any more conditioned by spatio-temporality than spatio-temporality is conditioned by those specific, unique events. In other words, can the theory escape the relational theory of Space-Time? Bertram Jessup compares Alexander's realism with that of Santayana in "Naturalism in 'Space-Time' and in 'Essence.'" After expropriating materialism rather unceremoniously—is it fair to speak of it as an attempt to nullify philosophy and higher values?—the writer proceeds to his comparison, which is interestingly and ably done. "Alexander is too ready to rest in the world, while Santayana is too impatient to have it out of the way."

So much for the central studies on Alexander. The opening essay by H. G. Townsend is a general discussion of "The Nature of Knowledge and the Knowledge of Nature." Concerning the first problem, to which major attention is given, it is emphatically contended, and historically evidenced, that psychology is utterly irrelevant and the source of most of our difficulties. The Lockean or British tradition, one willingly admits, has been hurtful, but perhaps it was bad epistemology and logic precisely because it was grounded on *bad* psychology. The writer tacitly encourages my

belief in that, while looking solely to logic for the nature of knowledge, and while defining logic as "a highly specific inquiry into the processes and structures of a specific realm of order," yet he finds this order exhibited in a "*problematic situation*" (he takes the term from Loewenberg) or *pre-analytic* level and in realms of categorical structure *genetically* distinguished (my italics but his terms). The terminology seems hopeful—and psychological. Two categories are submitted and ably, though briefly, argued: "implication" and "growth." One can agree with the author's contention that they are not altogether temporal in their meaning, but their temporal context seems scarcely irrelevant. These categories are suggested as pertinent to the knowledge of nature because nature is included within the realm of order. Transcendence is sanely disposed of as a brute fact, pervasive, a thing to be accepted.

The concluding study by George Rebec, "The Logical Root of Modern Life," is absorbing, challenging, breathing defiance, and beautifully written. For this writer, at least, naturalism stands condemned. The root of modern life is antinomy, the inevitable opposition between the one and the many, between the universal and the particular. The greatness of Plato, Plotinus, and of Kant is their fidelity to Reason and their "acceptance of the impact—and the tragedy—of the whole final unintelligibility." In his *Parmenides* Plato clearly saw that the one can neither be drawn from the many nor dwell apart. To deny the universal, as do the nominalists, is to repudiate reason. Mysticism, supernaturalism may be intellectually unsatisfactory, but modern life and thought have been superficial in trying to go around rather than through them. The argument, which I have crudely summarized, disarms the critic, but probably many, like me, will nevertheless be strangely moved.

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The Idea of Progress in Philo Judaeus. JESSE SCOTT BOUGHTON.
New York. 1932. Pp. ix + 291.

In presenting the philosophy of Philo Judaeus, as a synthesis between Rabbinic ideology and the prevailing Hellenistic philosophy, it is important to keep in mind that this harmony is grounded in a thoroughly Jewish background. It is not sufficient to point to the eclectic character of Philo's teachings, and to discover here and there Platonic or Stoic strains. The thesis of Billings' *The Platonism of Philo Judaeus*, for example, is precisely, as the name implies, an undue stress on the Platonic element in Philo, only in a perfunctory manner adding that "Jewish elements naturally enter into his thought." A careful analysis, however, of the spirit and

motivation of Philo's doctrines will place them within the framework of Jewish tradition, and show that for all his familiarity with Greek philosophy he does not depart from the point of view of Judaism.

This is an important point in Mr. Boughton's "interpretation of the personal faith of the ancient Jewish scholar," and in a good measure is responsible for an excellent presentation and analysis of Philo's basic ideas. The discussions on Philo have for a long time been colored by Jerome's epigram that "if Philo is not a Platonist, then Plato is a Philonist." Such a statement is only superficially true. Philo, educated Alexandrian Jew that he was, gathered together the terms of Greek philosophy and gave them a Jewish setting. Mr. Boughton provides some examples in his chapter on "The Idea of Purity, Harmony." In explaining the text in Genesis xxii, 18, in which God is represented as taking an oath that in the seed of Abraham "All nations of the earth shall be blessed," Philo takes the opportunity of bringing the word *εὐλογος* into the discussion of the character of oaths and witnesses. Besides drawing upon several Rabbinical principles in his account of the notion of "testimony," Philo goes on to emphasize the idea that "nothing that can give assurance can give positive assurance concerning God, for to none has He shown His nature." He is not here voicing the opinions of the Skeptical School, "but the thread of Philo's argument and the terms used both here and in other passages bearing the same theme suggest that it is quite a different realm of thought that controls Philo's discussion" (p. 143). It is rather the realm of thought that pervades Jewish mysticism in general and has found its way into the Fourth Gospel and in Mandeian literature. Or again in the notion that repentance is a "gift" of God or that it is a revelation of His existence and goodness we see the use Philo made of the Rabbinic tradition for his system of religious philosophy. One is to repent not for the gain of private well-being or personal satisfaction. Only the disinterested can have a rational approach to God. "But such disinterestedness lies not in a Stoic 'apathy' but in a love of God that forgets all private ends in a service of God that increases in enthusiasm as it continues. Such a love has little thought for personal salvation but much of that reasonableness of repentance which begins with the untrained man as a regenerative change and ends in the wise man as a divine humility of faithfulness" (p. 157).

It was the popular demand on the part of Hellenistic Jews to interpret their law in terms of the current forms of thought and a universal yearning for moral guidance and salvation which provided the stimulus for Philo's efforts. And the sanction for a new synthesis he found in the freedom given to the Jewish scholar to read into the Torah through the Synagogue services whatever inspira-

tional message he might feel prompted to expound. Philo laid great stress upon the Synagogue as the nucleus for a religious community in which the doctrine of universal rather than racial or credal regeneration would be dominant. The synthesis is achieved by the use of the allegorical method of interpretation, a method which had already become respectable procedure at the hands of the philosophers, and which the Haggadic or homiletical sermons had made popular among Jews. The allegorical method of approach is basic in Philo, for out of it proceeds the principle by which the synthesis between pagan naturalism and Jewish traditionalism is effected. The thesis of Mr. Boughton's study is that this principle is history; a theory of development and progress can justify both currents of thought. "It is the opportunity afforded him by the peculiarly Jewish product, the Haggadic Midrash, that makes it possible for him to suggest a philosophy of history" (p. 52).

The author has given a thorough and penetrating analysis of the "personal faith" of Philo based upon his lavish use of the allegorical method of exposition. Of especial significance is Part I in which is given the Jewish background and Alexandrian setting of the philosopher, and the chapter on the application of allegory to the "Law." One might add that the word "Law" as a translation of "Torah" is not so broad and comprehensive a term, and since the original is not unfamiliar to most readers it may have been advisable to leave it in the Hebrew.

IRWIN I. HYMAN.

NEW YORK CITY.

Atom and Cosmos. HANS REICHENBACH. Translated and revised in collaboration with the author by Edward S. Allen. New York: The Macmillan Company. 1933. Pp. 300.

This excellent popular exposition of the concepts of contemporary physics is based upon lectures which the author has broadcast from Berlin.

The book is divided into four parts. The discussion of Space and Time in Part I is a summary of the author's larger work, *Philosophie der Raum-Zeit Lehre*. Of especial interest are his clear account of the function of conventions in geometry and his theory of the causal structure of time. Two chapters are devoted to the theory of relativity. Part II, Light and Radiation, is a model of exposition. In successive chapters the author expounds the ray character of light, the wave character of light, the electrical character of light, and the material character of light. The structure of matter is the subject-matter of Part III. Again there is an admirable sequence: the molecule as basic particle in heat processes,

the atom as basic particle in chemical changes, the electron as basic particle of electricity; in subsequent chapters the author expounds the quantum theory of atomic structure. The concepts of causality and reality are discussed in two final chapters in Part IV.

The book is a masterpiece of exposition. It gives an authoritative, comprehensive, systematic, detailed survey of contemporary physics. The translation is excellent.

Although the book is offered as a popular exposition, it is essentially a non-mathematical discussion of the methodology and epistemology of physics. Professor Reichenbach is to be grouped with the logical positivists. He apparently accepts, however, a psychophysical dualism which would be unacceptable to Carnap and Schlick. Thus he says, "There is a physical agent, light, whose nature must be studied in the same way as that of matter or of the planets, and there is a subjective experience, light, which is occasioned by objective light, but which, belonging to the subjective sphere, to the inner world, represents something fundamentally different" (p. 96). He unequivocally asserts the existence of atoms, etc., in the sense of traditional realism. Concerning the debate between empiricism and rationalism he says, "It must be said that the natural science of to-day has given the victory neither to one of these points of view nor to the other, but rather that its significance lies in a wonderful synthesis of the empiricism-idealism alternative. The fundamental idea of empiricism, that only experience can decide on the validity of natural law, is retained with all its emphasis; but the principle of idealism, that only the combining of observed facts into laws created by thought constitutes science, is equally fundamental for the modern knowledge of nature" (p. 282).

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JOURNALS AND NEW BOOKS

THE INTERNATIONAL JOURNAL OF ETHICS. Volume XLIII, No. 4. Standardization and Ethics: *A. F. Liber* and *David Weinman*. Towards a Philosophy of Democracy: *A. H. Kamiat*. Religio Duorum Medicorum: *Robert Withington*. Discussions: Another Approach to Socrates: *Gustav Mueller*. A Scandal in Philosophy, or How to Make Philosophy Interesting: *T. T. Lafferty*.

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NOTES AND NEWS

The *Revue d'Histoire de la Philosophie*, which has appeared up
to the present time under the direction of M. E. Brehier, commences
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Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
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- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917. Quarterly. Edited by James P. Porter and William F. Book.
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Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter. Published without fixed dates, each number a single research. Founded 1922.
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THE JOURNAL OF PHILOSOPHY

IS IDEALISM REALISM?

A REPLY IN TERMS OF OBJECTIVE IDEALISM

"Will someone tell me what 'Idealism' is?"

With this entreaty Professor Pratt opened and closed a delightfully whimsical article which appeared recently in this JOURNAL.¹ With the same inquiry, he confides, he had earlier opened and closed the book, *Contemporary Idealism in America*. In years gone by, he had believed the idealist to be one who denied the realist's assertion that "the world did not depend for its existence on consciousness in any form"; one who cherished such slogans as "No object without a subject" and "*Esse est percipi*." Then to his confessed bewilderment, he "began to learn, from idealist after idealist, that the *esse est percipi* principle was no part of Idealism and never had been." This denial he finds reiterated or implied by several writers in the present volume. Yet he is troubled by this and other points at which the writers do not seem to be in agreement. Does this disagreement indicate that *idealism* has lost its meaning? Wherein does the modern idealist, especially the objective idealist, differ from the realist?

As Professor Pratt must have discovered on reading no farther than the *Introduction*, the writers, profiting it may be by the experience of others, chose to dispense with the artifice of a detailed credal statement. They found themselves in agreement upon such fundamental principles as the organic unity of the world structure, the philosophical necessity of interpreting "nature" in terms of its higher rather than lower manifestations, the ultimate reality of values, the rational order and intelligibility of the real world, or, in brief, the view that fruitful metaphysical explanation requires that primacy be given to the categories of spiritual rather than of mechanistic interpretation. Thus the structure of the *real* world is regarded as a rational organically unified order, intelligible to thought and expressive of value. Dogmatic uniformity in details of their philosophical position between exponents of a system may safely be taken as a sign of the sterility rather than the strength

¹ J. B. Pratt, "Is Idealism Realism?" in this JOURNAL, Vol. XXX (1933), pp. 169-178.

of the position. The writers of the present book did not seek the appearance of complete agreement, but chose rather to express freely both points of common agreement and difference. Indeed, definite effort was made to include representatives of the major forms of idealistic interpretation, and beyond this are variations of emphasis. Nevertheless, Professor Pratt's question may well be considered: What is the particular characteristic of a philosophical position which, with whatever unique aspects it may include, yet unites it with others as an expression of idealism?

In the reply which follows, it is my hope that many idealists will concur, but I shall assume no more than that it offers what, to one idealist, seems pertinent to the issues which Professor Pratt raises. If I analyze his article correctly, these are five in number: (1) the place of the *esse est percipi* principle in idealistic philosophy; (2) the idealistic conception of reality, and in particular, the status of the objective world; (3) the idealistic view of knowledge; (4) the significance of the *self*; (5) the relation of idealism to realism. This is an extensive program, and its treatment here must be fragmentary at many points. Furthermore, it will be limited to the point of view of *objective* idealism, since *subjective* idealism is considered elsewhere in this publication by Professor Brightman.

ESSE EST PERCIPi

In suggesting that idealism *should* be mentalistic, proclaiming the doctrine, *esse est percipi*, Professor Pratt is reiterating a belief that has been held by numerous *realistic* thinkers in recent years. Just thirty years ago, Professor G. E. Moore published his well-known refutation of the Berkeleian principle. To not a few idealists these arguments appeared brilliant and on many points including the issue of the principle itself as he interpreted it, convincing. But the *objective idealist* must protest that the designation of the argument as a "Refutation of *Idealism*" seems a most regrettable misnomer. The misunderstanding has persisted not only in Professor Pratt's thought, but so frequently in realistic statements, that some attention must be directed towards it.

Professor Moore opened his essay by pointing out that the conclusion fundamentally characteristic of modern idealism is that *the universe is spiritual*. From this very acceptable statement, he proceeds to make a bewildering, hasty, and unconvincing passage to the position that if *idealists* think the world spiritual, they must regard it as having its being in being consciously perceived. The assumption is made despite the fact that Professor Moore in the *Principia Ethica* describes spiritual values as real parts of the objective world, to be discovered like the color yellow, merely by being

observed. However, as we proceed with the "refutation," we discover that the error of idealists does not lie in their believing that the world is spiritual—Professor Moore "devoutly hopes" that it may be so. Their peculiar error lies in their reason for holding this belief, which is, we are told, the *esse est percipi* argument. The candid reply is that for objective idealists at least, and they constitute a generous percentage of idealists of both the present and past generations, *it is not*. The subjective idealist may hold, indeed, that all that is real must be a conscious mind or perceived by such a mind; that there can be "no object without a subject"; that "mind creates its object." Even here a proper interpretation of the view depends upon an understanding of the use made of the word "create." As Professor Sheldon wisely warns us, "We can not take it to mean *conjure into existence*." The point, however, is well developed elsewhere in this JOURNAL (*Cf.* Brightman, "The Definition of Idealism," pp. 429-435). Subjectivism, or mentalism, of this general type is rightly regarded as a form of idealistic interpretation—it is one way of explaining the world as a spiritual order, that is, *as an order whose structure is intelligible to thought and expressive of value*. I have no desire here to argue its specific merits. My point is that it is *one form* of idealistic interpretation as is the objective form, and no more synonymous with idealism as a whole, or as such, than critical realism is with realism, or Calvinism is with Christianity.

Plato, the most influential source of idealistic thought, never dreamed of the Berkeleian argument of *esse est percipi*, and probably would have rejected it, had it been proposed. Though Kant's language is ambiguous at times, he explicitly declared against a subjectivist or Berkeleian interpretation of his system. Hegel pointed out that all perceptive activity requiring a subject-object relationship, implies a more inclusive synthesis. Subject and object alike depend upon his higher synthesis for their being, and finally upon the unconditioned synthetic unity of the world order, of which they exist as organic parts. This world order, being absolute, can not participate as an infinite Mind in the relational activities of consciousness; that is, it can not itself be conscious, or a perceiving agent. The principle of *esse est percipi* was foreign to the fundamental insight of his system and anathema to him. Among more recent idealists, Professor Pringle-Pattison, in his Gifford Lectures, develops in some detail what is, perhaps, as strong an argument as that of Professor Moore, for rejecting the principle. Professor Bosanquet definitely refused to reduce the physical world to nothing more than objects or contents or states of any conscious mind, whether human or divine, insisting that "there can not be spirit . . . constituted by nothing but pure spiritual centres." For him, the

self was essentially fragmentary, a locus wherein is organized under limitations of finite experience, that which in its completeness is far beyond its grasp. Human knowers he regarded as coming late in the evolutionary development, and as depending upon an environment external to their own existence, and upon their own highly organized physical bodies. As for an Absolute Mind, it could not *as absolute* enter in its totality into the relationships which constitute the structure of conscious activity. F. H. Bradley reiterates repeatedly that reality extends far beyond the scope of human comprehension, while in its completeness, by necessary implication it must be beyond the possibility of conscious relational activity. After devoting two chapters in *Appearance and Reality* to a careful examination of the nature and status of the *self*, Bradley concludes that it "is so far from supplying such a principle (i.e., of metaphysical explanation), that it seems, where not hiding itself in obscurity, a mere bundle of discrepancies. Our search has conducted us again not to reality but mere appearance." In the *Appendix* to the same work (*Introduction*, III), he asks: "Can thought, however complete, be the same as reality, the same altogether, I mean, and with no difference between them?" To his own inquiry he replies: "This is a question to which I could never give an affirmative reply."

Further citation here is impracticable and unnecessary. My point is not that any form of subjective idealism, *when* it relies on the Berkeleian principle as ordinarily understood, is mistaken, but that very many genuine idealists believe such reliance to be mistaken. That is, my purpose is not to refute mentalism of this or any other type, but rather, to protest as strongly as I am able against the frequent indulgence of realists in the fallacy of composition, by the intemperate enjoyment of which, they are led to identify mentalism, so understood, with all idealism. The *fact* is that a large percentage of idealists do not and never have relied upon the principle of *esse est percipi*, and that to these idealists, if not to all, it does not constitute an intrinsic part of idealism. And surely we may rely confidently upon a realist to prize facts above all else.

REALITY AND KNOWLEDGE

Idealism is essentially a metaphysical position. It is concerned with the problems of knowledge and of error, but these are inseparable from the problems of metaphysics. Knowledge and reality constitute a single problem, in the last analysis—that of differentiating truth from error, reality from appearance, within the realm of human experience, and I shall consider them here from the point of view of this unity.

For the objective idealist, the "Epistemological Gulf" as under-

stood by certain forms of realism, does not exist except upon a fictitious map of the universe. Man is not a spectator, who, as an alien from another world might do, must seek to comprehend a natural order, foreign to his own nature and complete apart from himself. To suppose this is to place the "Epistemological Gulf" directly between man and his world, and to leave him without means of seeing through the dense vapors which must hover perpetually over such a chasm, any detail of the farther shore, or even any definite means of assurance that a farther shore actually exists.

In his contribution to *Essays in Critical Realism*, Professor Pratt protests that he is not a sceptic. How is the escape made? In the introductory essay of the same volume, in presenting what, it appears, is to be taken as the common position of the writers, Professor Drake explains that the credibility of experience as representing "real" events in the objective world is founded on *instinctive* and *pragmatic* grounds. He tells us that, "Everything is *as if* realism were true; and the *as if* is so strong that we may consider our instinctive and actually unescapable belief justified." Now, if one raises the question of knowledge at all, he must ask on what conditions he may thus trust human *instinct* and *need* as indications of the nature of the external world. The answer, it would seem, must be in terms of some systematic unity expressed through the functional activities of the two realms. Mere compresence, apart from any other relationship, if it has any meaning, certainly can not have the meaning of being the basis of intelligibility of one com-present existent for another. Unless human instincts and needs express the same systematic order as that which is regulative in the external world, there is no reason to regard them as indices of that world.

The objective idealist regards man as squarely within the world and an organically functioning part of its total organization. All that he is and all that he may do arise from and manifest the nature of that world. What appear discrete levels of existent being at first sight, on analysis reveal their intimate inter-relatedness. Thus the organic is clearly dependent on the inorganic. Yet it presents a new pattern of existence which biology no longer seriously attempts to reduce altogether to more simple physical and chemical relationships, but recognizes that here new characteristics of nature are manifest. Similarly, the spiritual life of human beings (i.e., the life of thought, will, and value-experience) is genuinely a manifestation of the natural or world order within which it has its being. With this naturalism might agree. The philosophical problem is that of which way the process is to be read. Is the real nature of the world, which expresses itself in both more simple and more complex forms and on both "lower" and "higher" levels of existence in the evolutionary

process, to be discerned more adequately in the simple or the complex, in "lower" or "higher" manifestations? The idealist is convinced that the most developed and highest of these various manifestations of the world order provide a more adequate access to the character of the reality which is being manifest, than do its simpler and lower expressions. Reality can be and contain no less than appears in its varied expressions. All the appearances which we discover arise out of the order of reality and present something of its character. Even illusions have some relation to the world of real being. But not all appearances express the real nature of the world with equal fullness and adequacy. It was this point which Hegel developed in his treatment of *degrees of reality*, and which Bradley so strongly emphasized. The stone, the ameba, and the spiritual life of man are all manifestations of the systematic structure of the world to which all belong—but it does not follow that all reveal the character of that world with equal completeness or clarity. Professor Pratt repeats that philosophy may start its account of the world either with *chaos* or *Zeus*. But it makes a vast difference to the adequacy of the account which it does start with. For the character of a reality which could produce a Zeus would, indeed, receive a meager manifestation in chaos. If we limit the range, it is also true that a reality which could manifest itself in the spiritual life of man, with its intellectual, moral, and esthetic achievements, would be but slightly revealed in the life of the ameba. When the idealist says that the universe is Mind, we may presume that everyone who possesses any acquaintance with the history of philosophy knows he does not mean that the universe is a conscious thinking being like ourselves. He does mean that it is an intelligible universe, whose systematic structure is no mere mechanism, but expressive of the principles of rational order and value which are also the constitutive principles of intelligent organization of our own experience. The particular finite knower may be said to have or be a *mind* precisely because, in addition to conscious awareness, he possesses the capacity to organize his field of experience in terms of these same principles. If he declines to regard the constitutive principles of his own rational experience as being also the constitutive principles of the real world order, he is faced with the double necessity of discrediting the external reference of thought and of accounting for the presence of the constitutive principles of his own mental life.

The idealist, like the pragmatist and certain realists, looks askance upon epistemological other-worldliness. To bifurcate the universe into two genuinely independent realms of *mind* and *objects*, is to remove the possibility of knowledge of those objects by mind. The only significant problem of knowledge is not that of how to get outside ex-

perience, or to compare thought with objects unlike itself, but how to get into the depths of experience and so discern its true nature. The physical sciences rightly do not regard their data and construction as false because limited and human, but as presenting reality from a particular point of view and under specific and to some extent self-imposed limitations. It is so with all activities of human knowing. To experience is to grasp some phase, some aspect, of that which is real. Knowledge does not depend on discovering a way to transport diplomatic representatives from an alien kingdom on the further side of the Epistemological Gulf, but it does consist in discovering a criterion for determining the degree of reality present and expressed in various experiences. To this end pragmatism applies a broad standard of relational utility, whereas Objective Idealism relies upon the final cosmic significance of value, coherence and systematic completeness. Upon these, it believes the relational utility depends and by them ultimately must be determined.

The systematic structure of the universe is to be discovered first through apprehension of incompleteness within its parts. To think systematically is to seek out inter-relations. The idealist would place no artificial limits upon this inquiry. In the incompleteness of each fact of experience he finds clear evidence of its membership in a more inclusive order. In the incompleteness and inter-dependence of each order which he discovers on the inorganic, organic, and spiritual levels of existence, he finds necessity for inferring a yet more complete and finally an all-inclusive and independent order of cosmic being. Since the total order must be self-complete and hence independent, it is designated as *absolute*, meaning no absentee sovereign of the universe, but the total pattern or system within which the manifold forms of cosmic activity are united as an organically systematic whole. It is difficult to understand Professor Pratt's interpretation of this position when, in *Essays in Critical Realism*, he says that "It is the inability of either idealism, pragmatism, or neo-realism to find any room for the possibility of illusion and error that makes all these systems quite untenable." Objective idealism discovers more than a satisfying amount of error in the world, and offers an account of this presence. In that no appearance or manifestation ever presents the total character of the order in which it arises (which would be the universe), but appears under the limitations of perceptual experience and human interests, it may be said in some degree to be a false appearance. Error regarding it increases in direct proportion as its pseudo-independence is taken to be genuine isolation. But on the other hand, true knowledge is possible since every appearance, however fragmentary and misleading if taken by itself, must arise out of and manifest some aspect of the world as it really is.

THE SELF

The reply to Professor Pratt's inquiry regarding the status of the *self* is implied in what has already been said. For objective idealists in general, the *self*, regarded as an independent isolated being, is an appearance and not reality. Its isolation is artificial; its separateness is that of a fragment. The self is a genuine part of the world—a manifestation of the world-system at the high level of spirit. As such, it is a more adequate expression of the nature of that world than anything else in the range of our experience, but its significance lies in the fact that it is such a *manifestation of reality*. It is not in the limitations which separate a particular self from the world, giving it the *appearance* of independence, that its importance lies, but in a capacity to realize and express in its conscious activities, that which has being and value beyond the finite expression. The expression and its instrument are valuable because of the significance of that which is expressed.

IDEALISM AND REALISM

"Is Idealism Realism?" Presumably Professor Pratt concurs in the definition of a *realist* offered in the *Essays in Critical Realism* (p. 5), and we shall not trouble him to differentiate the form of realism which he intends. "All who thus believe that existence is far wider than experience—that objects exist in and for themselves, apart from our experiencing of them—are properly called realists." This is a most hospitable definition. But empty existence is of little interest. The significant question from both a theoretical and practical point of view is that which asks *What* exists? *What* is this objective world? There is but one source from which an answer may be sought, that is, the interpretation of human experiences of that world. Naturalism offers one such interpretation, giving universal application to the categories and postulates of mechanistic explanation. The whole is accounted for in terms of its parts, the complex in terms of the simple, the more highly developed in terms of the less, the valuable in terms of the non-valuable, the *spiritual* in terms of the *physical*. Idealism offers another interpretation which proceeds in the reverse direction from that of naturalism. The structure of the real world is regarded as possessing organic unity. By its structure quite as much as by its material, or substance, the world is what it is, and it is this structure, in all its various complex manifestations, which demands explanation. No view of reality is adequate which is not capable of comprehending within itself all that the manifestations of reality disclose to us. It must account for those *unique* characteristics of structure which ap-

pear on the levels of spiritual, organic, and inorganic existence no less ably than it accounts for characteristics common to all. Idealism would insist upon according to the real world all the richness and fullness of being which its manifestations reveal in our experience. It would give to each of these manifestations a genuine importance, but as a guide to the truer understanding of the world, it would assign primacy to the fullest and highest, which, in fact, it discovers to be those of *spirit*.

I am not aware of the existence of any unique metaphysical system, neither naturalistic nor idealistic, which constitutes an intrinsic part of realism. If the assumption is correct that no such system exists, the only genuine opposition must be that between naturalism and idealism, and the realist, as one who believes in the real existence of a world of external objects which do not depend for their *being, on being perceived*, may, indeed, as he turns to metaphysics, embrace either naturalism or idealism. The reply, then, to the somewhat anachronistic query, *Is Idealism Realism?*, would seem to be that the two are not identical, but neither are they in opposition, since they are not offering contrary solutions to the same problems. The statement refers, obviously, to that which is fundamental and essential to the two positions, and not to all details of formulation which may be developed. The realist in epistemology is an idealist in metaphysics, it would seem to the writer, when he regards himself as being a genuine organic part of his real world, and when he regards that world as intelligible and looks upon the constitutive principles of his spiritual life as existing in and expressing its order. He finds untenable then the view that man is a slave of Fate, pursuing the transient forms of all that appears to his clouded eyes to add glory and worth to life and effort—ghostly fugitive forms of his own mind's creation, surviving for a little time in a world of blind and irresistible forces. Rather, he regards man as altogether from and of his world. From that world arise the significance and worth which man discovers, and of its nature these are the highest and fullest expression available to him.

PRINCETON UNIVERSITY.

CLIFFORD BARRETT.

THE DEFINITION OF IDEALISM

PROFESSOR Pratt, having read *Contemporary Idealism in America*, wants to know what idealism is.¹ His demand for definition is wholesome and should not be ignored. It would be easy for the contentious idealist to dismiss it with a facile *tu quoque*; for

¹ J. B. Pratt, "Is Idealism Realism?", this JOURNAL, Vol. XXX (1933), pp. 169-178.

realism is at least as much in need of definition as is idealism. What do the various realisms have in common—the new, the critical, the religious, the physicalistic, the dualistic? Is there any important epistemological or metaphysical proposition on which they would all agree? None but the proposition that idealism is false! What, then, is idealism? Professor Barrett and I are undertaking to answer the question.

The late Professor Mary Whiton Calkins was a member of the group that was working on the volume, *Contemporary Idealism in America*, although her lamented death prevented the completion of her contribution. It is, I hope, betraying no confidence to say that she urged on her colleagues the need of arriving at a precise common definition of idealism. Her proposal won my support, but aroused little interest among the rest of the group. This phenomenon is by no means isolated. It is not idealists alone who hesitate to define their terms. Who has not groped through the more than "thirteen" pragmatisms wondering what pragmatism is? Even realism, as was intimated above, has not been any too precisely defined; the definition which Professor Barrett cites from *Essays in Critical Realism*, p. 5, differentiates realism only from solipsism, but not from idealism.

If it be true that there is a tendency not to define or to use terms exactly—especially terms descriptive of philosophical systems—there must be some reasons for the tendency. Five possible reasons may be mentioned. First, there is the fear that a definition is a dogma. Secondly, there is the popular belief that definition should come at the end, rather than at the beginning, of an investigation—a belief which overlooks the hypothetical and tentative character of all concepts and definitions and which, taken strictly, renders the very beginning of an investigation impossible since its field and its problems would then be wholly unspecified. Thirdly, there is the genuine difficulty of discovering a formula which will be an adequate definition of a developing system of thought, such as every philosophical system ought to be; idealists, with their aversion to mere abstraction and their interest in the concrete whole, are particularly conscious of this difficulty. Fourthly, system-building and interest in the definitions of systems are to-day at a low ebb; specialization, particularly in symbolic logic, has crowded out the synoptic view of experience as a whole which is the essence of a philosophical system and, as I believe, of all genuinely philosophical thinking. Fifthly, the very use of terms descriptive of systems has become unpopular under the influence of Professor J. E. Creighton's genial article of thirteen years ago on "Philosophy as the Art of Affixing Labels."² Professor Creighton's wise warnings against the substi-

² This JOURNAL, Vol. XVII (1920), pp. 225-233.

tution of labels for thoughts appear to have led no small number of American philosophers to a fixed aversion to all labels. In some cases, systematic thoughts have gone with the labels.

Whatever be the reasons for hostility to the definition and use of terms descriptive of philosophical systems, it has had undesirable consequences. It has tended to aid and abet the fiction that we have reached a point where there are no fundamental differences among systems or "schools" of philosophy. It has encouraged each philosopher to entertain the delusion that the implicit (nameless) system which he holds is the only truth, or (worse still) is so original and so genuinely unique that it can not be related by any conceptual definition to any other system. (That way lies madness.) It has fostered the disintegrating belief that no system is worthy of attention and that philosophy consists solely of specialized problems.

Therefore Professor Pratt's demand for definition (in which Professor Frank E. Morris concurs³) is timely. How are we to determine the meaning of "idealism"? It might, of course, be done arbitrarily. Anyone who enters upon a universe of discourse may assign any meaning he chooses to the terms to be employed; but, although it may render his own thinking precise to define "idealism" in some unique way, the effect of such conduct on philosophy as a social enterprise is chaotic. Another procedure is to work out definitions on the basis of the logic of the problems, "independent of their historical origin, setting and development."⁴ Again, one may rely on etymology, defining words by their roots. But the most natural method is the historical one. Thus, a definition of idealism is sought by examining the systems that have been called idealistic.

In 1920 I made an attempt to define idealism by means of historical method.⁵ I then found four main types of idealism—the Platonic, the Berkeleian, the Hegelian, and the Lotzean (which last might equally well be called the Leibnizian). Obviously, these types overlap to some extent; and obviously, also, any attempt to describe the essence of these great historical systems is open to criticism.

³ "What," he asks, "is the idealist tradition?" See his review of *Contemporary Idealism in America*, this JOURNAL, Vol. XXX (1933), p. 190.

⁴ This was the method of E. G. Spaulding in *The New Rationalism* (New York: Henry Holt and Company, 1918), cf. p. xv; similarly, W. H. Sheldon, in *The Strife of Systems and Productive Duality* (Cambridge: Harvard University Press, 1918), dealt with what he regards as "typical systems," admitting that "it is probable that none of those we shall exhibit has ever been exactly held" (p. 38).

⁵ In an article, "Modern Idealism," this JOURNAL, Vol. XVII (1920), pp. 533-550 (esp. 535-539). A revised form of this article appears in my *A Philosophy of Ideals* (New York: Henry Holt and Company, 1928), pp. 160-190. The definition now proposed is based on a reconsideration of this earlier attempt.

Yet, if idealism is to be defined, it must be by reference to what Plato, Berkeley, Hegel, and Lotze thought. If that be true, we may say that idealism historically contains four main propositions: (1) Plato's (value is objective—its meaning and origin lie beyond the human knower); (2) Berkeley's (reality is mental—there is no non-mental being); (3) Hegel's (reality is organic—wholes have properties which their parts do not have); and (4) Lotze's (reality is personal—only persons or selves are real). Any system is idealistic which affirms one or more of these four propositions, provided Hegel's be included. Thus it may be said that the Hegelian principle yields a minimum idealism, while a "four-point" idealism is personalistic.

This Hegelian proviso excludes two misuses of the term "idealism," the solipsistic and the atomistic. Solipsism had better be called solipsism; it is called idealism chiefly by the uncritical and the malicious, but it has nothing important in common with the four great idealistic systems. By atomism here is meant the view which regards reality as mental, but holds mind to be a "mere succession of ideas"; this view was called "ideism" by Miss Calkins,⁶ and it would be well if her useful term were adopted. Hume's doctrine of experience is, then, ideism, not idealism. Likewise atomistic panpsychism is not idealism, although it is mentalistic. Similarly, analytic neutral realism is not idealism, although it is opposed to naturalism. The Hegelian proviso, we may add, serves positively to unify the "four-point" idealism; for all idealists regard value, mental experience, and persons as wholes or members of wholes.

It follows from the foregoing definition and an inspection of existing systems of thought, that a system might be partly idealistic without being wholly so. S. Alexander's "nisus toward totality" is an idealistic strain in a realistic system. Smuts, Whitehead, and even Sellars are partial idealists. Hence Bosanquet was able to write *The Meeting of Extremes in Contemporary Philosophy*; and Bosanquet's own rejection of personalism and (probably) even of impersonal mentalism (to which Bradley had held) shows that idealism can survive even when its Berkeleian and Lotzean limbs are lopped off. Professor Barrett regards the operation as beneficial to the patient!

Professor Pratt asks: "Will some one tell me whether Idealism believes in mentalism or not?" The answer is that all mentalism (except the solipsistic and atomistic kinds) is idealism, but not all idealism is mentalism. The "cardinal principle" of idealism is indeed the Hegelian—the metaphysical principle of organic wholeness;

⁶ Mary Whiton Calkins, *Persistent Problems of Philosophy* (New York: The Macmillan Company, 1925), p. 10.

all idealists oppose atomism and employ synoptic method. But to make mentalism the definition of idealism is to make the problem of matter more important than the problems of value and of mind. Most modern refuters of idealism, like G. E. Moore and Ralph Barton Perry, overlook the fact that idealism, when it is mentalism, infers its mentalism from its organic logic; it does not treat the *esse-percipi* as an ultimate of metaphysics. For organic mentalism, *esse* is not *percipi* or *percipere*, but *mens*.

"Further," Professor Pratt continues, "I should like to know the attitude of Idealism toward the dualistic theory of knowledge." The definition of idealism which I have proposed does not commit idealists to any one epistemology. But the *esse* is *percipi* has been painfully overworked. Berkeley did not hold that objective metaphysical reality was given in perception any more than do Santayana and Drake; his "notions" of other spirits, human and divine, are plainly dualistic. The *esse-percipi* refers to "sensible things," not to "causes" or "spirits." Nor did Plato hold that the "Ideas" are "ideas"; for him "mental content in knowing" is not "identical with the object known," or with any "part" or "slice" thereof. What could be more dualistic, again, than the mirroring done by windowless Leibnizian monads, or the knowing by active Lotzean selves? Even Hegel's reputed epistemological monism is attained only in and for the Absolute; human knowing remains dualistic, as Miss Calkins complained in discussion at the Sixth International Congress of Philosophy. I see no reason for restricting idealism to one type of epistemology. "Idealistic" epistemology (like Professor Barrett's) is not the only route to idealistic metaphysics. Realism—new and critical—has both monistic and dualistic forms. Why not idealism?

Is idealism, then, realism, as Professor Pratt fears (or hopes)? Why so? When Professor Perry repudiated every "moral and spiritual *ontology*,"⁷ he was denying Platonic idealism, as Professor Spaulding was affirming it in his "neo-realism of ideals."⁸ So likewise, there is a real issue turning about each of the four elements in idealism. The dualism of Professor Pratt may be called realism if he wants to emphasize the inorganic, nonmental, impersonal constituents of reality; it may equally well be called idealism if he wants to emphasize the objective values, the organic, mental, personal selves which he regards as permanent features of the cosmos (if I understand him aright).

⁷ Ralph Barton Perry, *Present Philosophical Tendencies* (New York: Longmans, Green and Co., 1912), p. 344. Cf. his *Present Conflict of Ideals* (New York: Longmans, Green and Co., 1918), p. 371.

⁸ *Op. cit.*, pp. vi, 516-517.

It is obviously true that no system of philosophy can be identified with a definition, and that any genus is subdivided into many species. It would therefore be an incoherent procedure to try to defend or attack idealism merely as the organic principle that there are metaphysical wholes (or a whole) which have properties that their parts do not have. One should treat a system of thought as a living organism, not as a backbone. Hence one should consider the different types and degrees of wholeness which different idealisms defend.⁹ Idealism may be "objective" or "personalistic," singularistic or pluralistic, it may deal in various ways (the Platonic, the Hegelian, etc.) with the irrational factors in the universe. Perhaps these and other differences among idealists are fully as important as their agreements; in any case, no discussion of idealism can be regarded as adequate if it deals with a bare definition or an abstract "cardinal principle." Philosophy needs definition; but even more, it needs comprehensive understanding.

This attempt to define idealism may be brought to a close by a document which has some historical interest in this connection. It is a "Platform of Personalistic Idealism" on which Professor Mary Whiton Calkins and I agreed May 25, 1929. It defines positions which may be held by those who affirm all four types of idealism as defined above. The first "plank" is Berkeleian; the second and third, Lotzean; the fourth, Hegelian; and the eighth, Platonic. Let Professor Pratt note that the fourth recognizes epistemological dualism; let him also note that the Platform accepts the mentalism which he craves, yet without excluding the possibility of objective, nonmentalistic, and impersonal idealisms.

PLATFORM OF PERSONALISTIC IDEALISM

1. The universe is completely mental in nature.
2. Every mental existent is either a self, or else a part, aspect, phase, or process of a self. The term "person" is used for selves capable of reasoning and ideal valuations.
3. The physical universe may be regarded as the direct experiencing and willing of one cosmic person,¹⁰ or as a system of infra-human selves, or as a system of ideas in the minds of finite persons.
4. The total universe is a system of selves and persons, who may be regarded either as members of one all-inclusive person who individuates them by the diversity of his purposing or as a society of many selves related by common purposes.

⁹ See Professor Barrett's article in this JOURNAL, and also his discussion of objective and personalistic idealism in his *Ethics* (New York: Harper and Brothers, 1933), pp. 430-437.

¹⁰ The term "cosmic person" is understood to include both the God of theism and the Absolute Person.

5. Every self directly experiences itself.
6. The self knows some other selves indirectly, by inference.
7. Any metaphysical theory (except materialism which denies facts of direct experience) about the quality of reality or the number of ultimately distinct beings is compatible with all scientific observations and with scientific laws conceived either (a) as generalizations of observed sequences or (b) as statistical formulations of average behavior. But philosophy is dependent upon the facts revealed by the sciences for its conception not only of the structure of the universe, but also of its values and purposes.
8. Esthetics and ethics are based on psychological doctrines concerning the valuing consciousness, but go beyond descriptive psychology both in their normative aspects and in their metaphysical implication of beauty and goodness in the universe.
9. Similarly, the science of religion is primarily a psychological and historical discipline; but the object of the religious consciousness, God, may be identified with a metaphysical object—the cosmic person.

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BOOK REVIEWS

The Three Jameses: A Family of Minds. Henry James, Sr., William James, Henry James. C. HARTLEY GRATTAN. New York: Longmans, Green and Co. 1932. xi + 376 pp.

This is a book which, despite its many faults, typographical and otherwise, it would be easy to condemn beyond its just deserts—it offers so large and inviting a target to the critic who is a specialist either in the novel, in philosophy or psychology, in theology, or in the economics of large fortunes. For in attempting his triple biography, which turns out to be quadruple, since it includes a sketch of the elder William James, Mr. Grattan has bitten off more than even a superbiographer, which he decidedly is not, could successfully chew. Where indeed is the contemporary writer who would be capable of a sympathetic understanding and appraisal of all of the four complex and diverse James mentalities? Many competent literary critics who might do justice to Henry James the novelist would merely caricature his brother William; most professional philosophers who might pretend to expound the ideas of William would in their turn be equally at a loss to estimate the fictions of Henry. And if a rare philosopher-critic could be found who might conceivably comprehend the two sons, he would almost surely be alienated either by their father's theological outpourings or their grandfather's stern acquisitiveness.

Mr. Grattan, a young New York editor whose previous writings have combined a certain amount of literary criticism with social history, has rushed in with journalistic enterprise where specialists have feared to tread. His work, moreover, is addressed to the modern reader of biography, that spoiled creature who has become accustomed to being entertained. The resulting volume is better, in many ways, than might have been expected. At the same time the scholars who have given serious attention to each of the four Jameses are presented with a great many tempting openings. Mr. Grattan seems doomed to satisfy them only in the parts of his book with which they are severally the least familiar.

Before losing sight of the James forest among the individual trees, it should be pointed out that the author's biographies concern four closely-related members of a single family, but they do not form a group portrait or family biography. This separation of his quartet of figures lends clearness of a sort, where confusion (thanks to the over-supply of Williams and Henrys) is only too probable. But it sacrifices an important ensemble effect, especially in depriving the reader of an adequate view of the remarkable home life of the three younger Jameses. We are told that Henry James the Elder "actively participated in the lives of his sons," spending as he did a large part of his time in the home circle, but we do not see that happen before our eyes. Thus one of the chief advantages to be expected from a group biography as against separately recorded lives is missed. Another advantage of presenting several members of the same family within two covers, however, the author fully exploits, namely, that of challenging such American political families as the Adamses and the Harrisons with a rival from the intellectual field. Perhaps the chief value of his book will turn out to have been the way in which it has focused public attention upon the intellectual dynasty of the Jameses as a living segment of the American tradition.

Of the four books into which the volume is divided, only the first two, dealing with the elder William and the elder Henry, and occupying together about the first hundred pages, afford new territory for the biographer. Here Mr. Grattan is the first to furnish extended studies, and he deserves much credit for the trail-blazing he has accomplished. But to hail his effort as a "book to end all books about the Jameses," as Mr. Burton Rascoe did recently, is simply ludicrous. Neither of his original studies can be regarded as anything like definitive. Already new material, of which quantities must exist, has come to light concerning William James the Elder; and several books by able scholars dealing with his son Henry more thoroughly than does Mr. Grattan, are either nearing

completion or awaiting publication. William James the philosopher, to whom the author devotes a hundred deprecatory pages, and Henry James the novelist, who is mildly lauded in one hundred and fifty, have long been the objects of competent critical attention, and the end is not yet. The present book should be merely the first of a number dealing more minutely with the elder Jameses. As for the younger representatives of the family, its comments for the most part, in the light of the existing literature, are both superficial and superfluous.

On his first page Mr. Grattan announces his intention of confining himself to the male line of the Jameses in a sentence which can not be allowed to go unchallenged: "... certain it is in this case that it was the male blood in a new environment that lifted the family from mediocrity to distinction." In accordance with this somewhat restricted view, Catharine Barber, the third wife of William James the Elder and the mother of Henry the Elder, is hardly more than mentioned. This in spite of the fact that Mrs. Russel Hastings of New York City, who has published extensive genealogies both of the Jameses and the Barbers, concludes "that the Barber line accounts for the literary and artistic talents which have cropped out so abundantly in Catharine Barber's descendants from time to time, and that her Scottish forbears, become Irishmen for a few generations, are a better reason for the phenomenal father and two sons than are her husband's Welsh ancestors who produced a line of successful merchants and lawyers." In a letter to the present reviewer, Mr. Henry James of New York City, while he is "not so confident as Mrs. Hastings seems to be that the whole story is traceable to Catharine Barber," adds this further interesting speculation: "... judging by Catharine Barber's picture I should say that my grandfather and my father resembled her physically much more than they resembled old William James. In fact, I find that I think of two physical types in the family,—one dark-haired, dark-eyed, and pretty much resembling portraits of old William James, and the other blue-eyed and less dark, among whom I would reckon my father, my uncle Henry, my father's cousin Mary Temple, and a few others. So far as I am able to judge them, the members of the family whom I think of as intellectually the most interesting belonged to the latter category." Although it is true that one of William James the Elder's sons by his first wife, Elizabeth Tillmann, the Reverend William James, D.D., was also a man of some intellectual attainments, no student of the family can afford to overlook the evidence concerning the Barber ancestry which is contained in Mrs. Hastings' articles in the *New York Genealogical and Biographical Record* for 1931.

Although Mr. Grattan has made a good beginning in recording the outlines of the life-history of William James the Elder, more information is constantly turning up, some of which has already cast new light upon the astonishing business career of that founder of the family fortune. A new and as yet unverified account of his coming to America, which conflicts with the more picturesque family tradition, has come to light, and may be the explanation of his sudden and otherwise almost inexplicable rise to affluence.¹ Mr. Codman Hislop of Union College has recently supplied the complex and extraordinary background of the lottery transactions of 1821-1826, in the course of which William James the Elder acted as the "angel" (to the extent of one hundred thousand dollars at six and one half per cent.) of the redoubtable President Eliphalet Nott. He has also discovered that James was favorably known to the Trustees of Union as early as 1803, and that he became a Trustee himself in 1827, not in 1831, being made a member of the Finance Committee. Among the John R. Williams Papers in the Detroit Public Library some letters of William James have just been found, one of which shows that he loaned John R. Williams five thousand dollars on August 20, 1822, at the same time that he was financing Union College. Truly the James resources were endless at that period! What is significant, at least to the economic determinists, is that later, upon their first sub-division, they were ample to insure the leisure of Henry the Elder and eleven other heirs; but at the next division they provided legacies which left a labor-stimulating gap between the needs and incomes of the famous sons.

The author's account of Henry James the Elder, which quotes liberally and skilfully from the extensive writings of that "unregarded sage," has been generally acclaimed as the most noteworthy part of his book. Certainly it is true that the father, in his pages, gains in stature at the expense of the sons, and especially of William. Perhaps in view of the long neglect Henry the Elder has suffered, that is only just. And yet it is perfectly clear to-day why the father failed to catch the ear of his generation, where the sons succeeded in theirs. In spite of a style that is often superbly effective, the "collective opacity," as his friend W. D. Howells put it, of Henry's works repelled all but the most resolute of his prospective readers in the 'sixties and 'seventies, and those of to-day are even less patient. Mr. Grattan deserves no little applause for the manner in which he has threaded his way through the major difficulties, and has produced an intelligible, if somewhat simplified, version of his subject's successive attempts to "say himself out."

¹ Larrabee, H. A., "The Jameses: Financier, Heretic, Philosopher." *The American Scholar*, I, 402.

Followers of Henry James the Elder among the Swedenborgians, a number of whom still exist, can not accept all of Mr. Grattan's interpretations as correct—some of them holding that James can not be called "a thorough-going supernaturalist" in the ordinary sense; and that his apparent "indifference" to such movements as Abolitionism and his failure to "ingest" the theory of evolution were governed by his greater interest in what he considered to be the higher affairs of the soul. But for the ordinary reader, unversed in the theological controversies within the New Church, the author's exposition will be found adequate. Those who desire a more profound understanding of Henry the Elder will do well to await the publication of many of his letters by Professor R. B. Perry, and also by Professor Austin Warren in his forthcoming biography, which promises to clear up a number of points left in doubt by the present volume. An error for which the present reviewer is partly responsible stands on page 28, where Henry is referred to as "the first James to receive a degree," when his half-brother William had graduated from Princeton fourteen years earlier.

Of more specific interest to philosophers and psychologists is the section devoted to William James the Younger, and on the whole a decidedly adverse report. Space will hardly permit a statement of Mr. Grattan's indictment, much less of the case for the defense. But the author's guiding idea about William seems to be stated in the sentence (p. 98): "Unfortunately by his example he (Henry the Elder) fed the worst side of his son William's mind as we shall see." Now this "worst side" is plainly William's tendency to justify his moody personal predilections in the field of religion in the face of what he called the "scientificisms" of the day. But just why the son's religiousness (such as it was) should be so much more reprehensible than his father's in Mr. Grattan's eyes is a little difficult to understand. One suspects that the latter is guilty of a certain amount of "scientificism" himself, and prefers Henry's lofty disdain (which can be met with an answering scorn) to his son's more direct assault. In spite of frequent resort to that contemporary swear-word "rationalization," he makes it tolerably clear that William James gave aid and comfort to those who wanted to be religious and who were dissuaded merely by intellectual difficulties, simply because he always aligned himself with the party of action and hope against all paralyzing abstractions and fixities of outlook. "To consider hypotheses is surely always better than to dogmatize *ins Blaue hinein*," as James once said. But he does not consider where that position would have landed James in an age when the action-blocking dogmatisms were theological rather than

scientific. Neither does he give sufficient attention to that basic scepticism which, in the action-loving but intellectually conscientious person, is likely to make pragmatism seem necessary. People who merely want to believe, go ahead and believe; it is the incurable sceptics-who-want-to-believe who swell the ranks of the pragmatists in matters of religion.

Mr. Grattan points with apparent approval to the fact that, appropriately enough, William James "first of all 'philosophers' emphasized the personal equation in philosophy." Now one may easily dispute the importance of the personal equation in philosophy; but if it be granted, then surely William James's stature rises, quite apart from the fact that many of his views have been rendered obsolete, which bothers Mr. Grattan. For James was, one sometimes thinks, one of the last of the Individuals; and the proper title for a study of him was chosen by M. Le Breton for his Sorbonne thesis *La Personnalité de William James* (unfortunately unknown to Mr. Grattan, along with the brief study by Howard V. Knox). It is for that radiant personality, that "sportive, wayward Gothic sort of spirit" so lovingly described by Palmer, Royce, Santayana, Hodges, Chapman, and a score of others, that the reader will search in vain in the present volume. In the absence of it, doctrinal criticism becomes easy (it is a weakness of the personal equation position that with the loss of sympathy, all is lost); and one wonders how in the world James's comparatively slender stock of fundamental ideas (even though his erudition was far greater than was generally supposed) ever "provoked frenzied activity among men who had long been sleeping in the arms of Bishop Butler's *Analogy*," or (in pure Menckenesese) "brought American philosophers to their feet with a yell." The long list of distinguished minds, not merely the Papinis of this world, which have been deeply influenced by the impact of James's ego and his own self-revelations in the *Letters* and in all his books, sufficiently disposes of the grotesque "eupeptic religiomania," a sort of pious T. R. among philosophers, of Mr. Grattan's pages.

Henry James the novelist, who commands more space than any other member of the family, although much of it is devoted to mere condensations of his novels, must regretfully be left to the literary critics. Suffice it to say that after justly acclaiming Henry James the conscious artist (and he was nothing if not that) as indubitably great, the author seems to prick the bubble of his tribute by a wholly sociological interpretation which dismisses James as "the supreme analyst of the leisure class under the capitalistic régime." A clearer distinction between sociological and esthetic criteria would help matters.

In a short "Epilogue" the "bequest of the Jameses" to the present and future is assessed, almost wholly in terms of literary influence. This is a great injustice to William, who finds himself figuring as little more than "one of the forebearers [?] of such writers as Joyce, Proust, Faulkner, etc." Few books in fact contain so many partially correct analyses accompanied by irritating miscues. While there are many good sentences and flashes of critical insight, much of the book's style can only be described as sloppy, and the proof-reading is inexcusably bad. Some of the more damaging errors among many are misspellings of Thomas Cumming Hall, John Robison, *Letters on Theron and Aspasia*, Ik Marvel, Haeckel, Ste. Beuve, Rockefellers, Bixler, insoluble, parvenu, galvanizing, solider, not to mention a chronic disregard of French accents.

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Where Is Science Going? MAX PLANCK. Translated by James Murphy. New York: W. W. Norton & Co. 1932. Pp. 221.

More readable by the layman than even *The Universe in the Light of Modern Physics* is this new book by the originator of quantum theory. The first chapter on science between the years 1880-1930 is, by its extreme brevity, perhaps the least liable to leave an impression on the reader. But this is compensated for by the remaining chapters (II, "Is the External World Real?"; III, "The Scientist's Picture of the Physical Universe"; IV, "Causation and Free Will"; V, ditto; VI, "From the Relative to the Absolute") and finally by an epilogue in which Planck, Einstein, and Murphy discuss, *inter alia*, the present status of the concept of dynamic (strict) causality and the temper of modern physics. The book should be of service to epistemologists, philosophers of science, and to such ethical thinkers as are losing sleep over the question, just what is it that modern physics has to say anent determinism, moral and non-moral?

The prologue, by Einstein, provides a beautiful glimpse of the scientific temper of Planck wittingly, and unwittingly of Einstein himself. Quoting: "The state of mind which furnishes the driving power [of the true scientist] resembles that of the devotee or lover. The long-sustained effort is not inspired by any set plan or purpose. Its inspiration arises from a hunger of the soul" (pp. 11-12).

The introduction, by the Irish translator of the book, is a biographical sketch of the author. The portrayal contains a snapshot of Einstein in an unofficial mood and at home in Caputh near Berlin.

In discussing the reality of the external world, Planck attempts a *reductio ad absurdum* of scientific positivism. The argument is that if positivism were true, there would be no science, which latter depends upon an escape from the privacies of individual experience into an objective, public realm, entirely independent of the knower. Conclusion: "There are two theorems that form together the cardinal hinge on which the whole structure of physical science turns. These theorems are: (1) there is a real outer world which exists independently of our act of knowing, and (2) the real outer world is not directly knowable." Planck, in his *reductio*, is a trifle naïve in not taking into account the kind of rationalistic positivism which C. I. Lewis propounds in his *Mind and the World Order*, a semi-positivistic theory of knowledge which explains universality or common experience in conceptualistic terms. However, Planck's remarks are sufficiently direct—like all genuine naïveté—to startle even the pragmatic conceptualist into further reflection.

As the title of the third chapter suggests, it contains a correspondence-theory of scientific knowledge and truth. The essentials of this theory are rather vaguely brought out in this quotation: "... the physicist . . . constructs a synthesis of concepts and theorems; and this synthesis is called the scientific *picture* of the physical universe. It is a *representation* of the real world itself in so far as it *corresponds* as closely as possible to the information which the research measurements have supplied" (p. 85, my italics). To obtain this picture, "from the whole complex of sensory data everything must be cut away and discarded which may have arisen from the constructive, subjective tendencies of the sensory organs themselves" (p. 86). Coherence or logical consistency also figures in determining the truth of the system of physical propositions (p. 86). A significant distinction is made between "the bodily eye of the measuring physicist" and "the spiritual eye of the speculative scientist," which latter may unobtrusively observe physical processes precisely because it is not on their level (p. 95). The relation between the two kinds of eyes is not described, but idealists will be glad to read that, without the coöperation of the spiritual eye, the bodily eye could never perceive the real, transcendent nature of reality (p. 96). The last paragraphs of this chapter prepare the reader for the subject-matter of the next two, on causation and free will, by remarking that there is not "the slightest reason, up to now, which would force us to give up the assumption of a strictly law-governed universe" (p. 100) and that "the question of the human will has nothing whatsoever to do with the opposition between causal and statistical physics" (p. 102). Certain philosophers who have for some time felt the truth of the latter propo-

sition will be relieved to discover that it has occurred even to a physicist.

Now one who believes that even "the highest types of human intelligence are subject to the (strict) causal law" and that "a day will come when the more profound and increasingly more refined development of scientific research will be able to understand the mental workings . . . of the highest human genius in their causal relations, because scientific thought is identical with causal thought" (p. 158) may expect certain difficulties in admitting and explaining free will. Planck does not escape them. But he does not evasively waive them. His solution seems to rest mainly on the notion that it is only to the *object* of experience that the category of cause will apply. Since by definition the knowing subject is never object for itself, it may continue to consider itself bound by a moral law if it will, but not by a causal law in the deterministic sense. This is reminiscent of the Kantian view, with which Planck is familiar, and it is certainly out of keeping with Planck's main view of causality as not a category or concept of the mind but as real, extra-mental transaction. In this connection, however, he holds that everything objective (as over against the subjective) is causally determined with the exception of "one single point in the immeasurable world of mind and matter. . . . This point is the individual ego. It is a small point in the universal realm of being; but in itself it is a whole world, embracing our emotional life, our will and our thought" (p. 161).

A moment's critical reflection reveals the inadequacy of this treatment, especially if the critic turns to certain other propositions asserted by Planck himself. "Every individual science sets about its task by the explicit renunciation of the egocentric and anthropocentric standpoint." Hence if a proposition about the ego and its volition is to be scientifically true, it must be true independent of egocentric perspectives and limitations. Planck is the first to admit this, and himself writes "if a man could perfectly see through himself as the eye of God sees through him . . . then, on the basis of the law of causality, he would foresee every action of his own will and thus his will would no longer be free" (p. 104). If this is true, does it help any to go on to say, "But that case is logically excluded; for the most penetrative eye cannot see itself"? For admittedly here the finite subject is *object* for the divine eye, which sees everything truly under the causal law. Furthermore, discounting for all *perspective*, as science must, to speak of the egocentric impossibility of an eye seeing itself becomes simply irrelevant. And when Planck calls this kind of solution "The Answer of Science" (p. 141), one looks around in vain to actual science, in its characteristic dress, for confirmation.

It should be pointed out that since "strict causality is not an inherent necessity of human thought" (p. 112) its reality is not demonstrable. It is only the scientific, non-logical urge to posit strict causality, and the greater satisfaction that the hypothesis yields, which wins its case against the hypothesis of statistical causality. The time will come, Planck believes, when dynamic causality will be reformulated in a more adequate way, so that its principle will not be embarrassed even by Heisenberg's Principle of Indeterminacy.

If intellectual annoyance is a delight, the description of the development of science from the relative to the absolute is bound to give certain "objective relativists" in theory of knowledge a good deal of delight. Aside from three specific cases of the absolutizing of what in classical physics had been relative—atomic weight (p. 179), energy of the neutral and electromagnetic fields (p. 182), energy of matter (p. 182 *et seq.*)—the reader is presented with the statement that "the term 'Relativity' does not refer to physics as a whole. . . . As a matter of fact the concept of relativity is based on a more fundamental absolute than the erroneously assumed absolute which it has supplanted" (p. 195). This is perhaps the most important proposition in the book. A mature understanding of it would clear away much rubbish in contemporary epistemology and philosophy of science. The point is that the proposition which describes let us say space and time as absolute when they really are relative *in a physical sense*—such a proposition is itself only relatively true. But the proposition that truly describes a relative space and time is itself absolute *in a theoretical sense*. These above remarks are not Planck's, but they express essentially his—and others'—belief that the confusion of physical and theoretical relativity is inordinately productive of philosophical howlers. They suggest also his belief that there are certain constants *in nature* the discovery of which is the scientist's objective. In conclusion, Planck writes that "absolute science" is "an ideal goal which is always ahead of us and which we can never reach. . . . We are always struggling from the relative to the absolute" (pp. 199–200). That is where science is going.

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Proceedings of the Aristotelian Society, 1931–1932. New Series, Vol. XXXII. London: Harrison & Sons. 1932. Pp. 342.

The present volume is more worth perusal than its immediate predecessors, though as usual the contents are not of uniform merit. The Presidential Address by Professor W. G. DeBurgh asks what

characteristics constitute greatness in men. Great men have a certain human historical "magnitude and splendour," dependent on rare gifts and perhaps on an exceptionally favorable environment, while the genuinely good man, though in himself less than great, seems to point to something higher than what is contained in the historical process. Professor G. C. Field has a good discussion of definition in ethics, with criticisms of Moore and Ross. The Reverend Mr. D'Arcy also criticizes Ross, not very profoundly, though his paper contains, at the end, a good statement of an Aristotelian personal attitude towards ethics.

Among the more metaphysical essays, Professor H. F. Hallett contributes a good discussion of Kant's ambiguities in defining the subjective. His further conclusion that all that appears is in its own manner real, is perhaps chiefly valuable as a warning, and does not illuminate the nature of reality. Dr. C. D. Broad gives us a dialectical refutation of Dr. McTaggart's principle of "the dissimilarity of the diverse." Of the other metaphysical essays, the best is by Dr. Hilda D. Oakeley, "The Status of the Past." She holds that the past is real in a sense in which the future is not. The self and its self-consciousness are rooted in the past. Mr. H. H. Price discusses our knowledge of other minds in a rather conventional manner, but laying stress on an argument which is parallel to the old teleological argument for the existence of God—we know other minds by their works. One would like to raise a query why those who discuss this perennial topic so seldom emphasize such obvious facts as the existence of language, and the presence in one's own individual mind of knowledge which he could not have acquired by his own immediate experience, past or present? It may be granted that in dreams we speak to imaginary others, and we are ourselves both sides of the conversation. But if we regularly learned new truths by such means, we might well infer that dreams were actual contacts with other minds. Mr. C. A. Mace has an acute discussion of causality, starting with the usual reference to Hume. He says that causality involves a necessary relationship which is not to be identified with logical necessity, and also involves functionality and continuity. The same subject has been much debated on this side of the Atlantic, and I do not observe that Mr. Mace has made any absolutely novel contribution.

Of the remaining papers, that by Dr. J. H. Woodger is entitled, "Some apparently unavoidable characteristics of natural scientific theory." He discusses "atomicity" and "determinism," says causality for the biologist is merely the use of the method of difference, and finally gets involved in an attempt to disentangle the relations of wholes and parts, and parts of parts, to causality and determinism.

He seems to be trying to write himself clear, and the reader always suffers in such a case. But a worse example of this is Mr. J. M. Thorburn, who writes with cloudy suggestiveness about Spengler and France and Germany, under the curious title, "The victory of pure music over painting in the 17th century."

One further paper leads me into a little digression. It is that of Mr. G. H. Ryle, who debates the sorts of cases underlying Russell's "theory of descriptions," independently of Russell, and in a very clever manner, with some new illustrations of cases where we do not really mean what we say. When we say, "Poincaré is not the king of France," we are talking about Poincaré. But if we said, "The king of France is not Poincaré," we should not be talking about the king of France, for there is no such person to talk about. So also with such cases as: "Carnivorous cows do not exist," "Unpunctuality merits reproof," "Honesty compels me to say so," "The top of the tree was cut off," "The idea of taking a holiday has just occurred to me," "The severity of the winter is responsible for the high price of cabbages," "The true Englishman detests foul play." The philosophical dangers of hypostatizing a description into a thing are real enough. Mr. Ryle does well to call attention to them again. But I wonder if there may not be an even more serious converse danger of denying the thing, if it can be reached only by a description. One may be led to postulate an immediate experience of direct contact, and deny reality to all not thus encounterable. Or the assumption that the real is always particular, but thought always of the universal, may result in a completely agnostic epistemology. This comment is not so relevant to Mr. Ryle as it is to Mr. Russell and others, but I think it is worth the fullest consideration, much more extended than I have time for here. We know Julius Caesar or Mussolini or Hamlet by description, and there is also a sense in which we can meet Mussolini personally. But it is not clear that our knowledge of Mussolini is made any more accurate because of this possibility of personal meeting than is our knowledge of Caesar or Hamlet. The sense experiences which in some measure verify the description do so only for one who comes prepared to understand and interpret them by the aid of the description. This is in part evidenced by the case of the lady who sat beside Mussolini in the cinema, if the anecdote is to be believed, and who congratulated him on his courage when he did not rise and cheer with the rest when Il Duce appeared on the screen, "we all feel that way, but we do not dare." If I also mentioned Hamlet above, I had a reason for doing so. There have been books written about his personality. We know him better than we know some of our own kin. We can describe the non-existent, and the

theory of descriptions tells us how. But are all such statements false, as the theory further asserts? Or when we describe Hamlet are we telling the truth only when we describe what Shakespeare thought? How do we know what Shakespeare thought? Are not Hamlet's thoughts more available to us than Shakespeare's? Is it any part of the business of a logical theory about descriptions to legislate about the metaphysical reality of Colonel Newcome, who went off and made a fool of himself, to the great annoyance of Mr. Thackeray? Or about that of fairies, or perfect circles, or God? Can we not describe a possible thing, and be right about what it would be? But I may have wandered too far from Mr. Ryle's interesting examples of language that means not what it says.

HARRY T. COSTELLO.

TRINITY COLLEGE, HARTFORD.

JOURNALS AND NEW BOOKS

MIND. Vol. XLII, No. 167. Mr. Stace on the Construction of the External World: *H. H. Price*. Prof. Hallett's *Æternitas* (II): *C. D. Broad*. Aristotle's Doctrine of Substance: *D. R. Cousin*. Mr. Joseph's Defence of Free-thinking in Logistics: *L. S. Stebbing*.

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NOTES AND NEWS

The Annual Meeting of the American Psychological Association will meet at the University of Chicago, September 7-13, 1933. The topics of the meetings include the following: September 7: Physiological Psychology; Personality; Psychology of Reading; Research Films; September 8: Human Learning, Aesthetics; Child Psychology; Psycho-physics; September 9: Sensation and Perception; Child Psychology; Memory; September 11: Animal Psychology; Mental Tests; Galvanometric Studies; Instructional Films; September 12: Social Psychology; Animal Psychology; Clinical Psychology; September 13: Industrial Psychology; Animal Psychology; Abnormal Psychology. The Presidential Address will be given by Professor L. L. Thurstone, the evening of September 11.

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The Fallacy of Unipolar Explanation. W. H. ROBERTS.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 11. May 25, 1933.

Indeterminism and the Concept of Physical Reality. V. F. LENZEN.

The Metaphysical and the Logical Individual. PAUL WEISS.

Material Truth in Rational Thinking. KURT EDWARD ROSINGER.

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Subscription \$4.00. 300–400 pages. Founded 1895. Edited by W. S. Hunter.
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THE EMPIRICAL METHOD IN PHILOSOPHY

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THE JOURNAL OF PHILOSOPHY

THE EMPIRICAL METHOD IN PHILOSOPHY

IF A sensationalist theory of knowledge takes upon itself the name of philosophic empiricism defined as "the theory that all knowledge is derived from sense experience," it must recognize that what may be called "the empirical temper" is a much wider and vaguer matter. As such it is close kin to common sense where the latter, as distinctively practical, signifies average or normal experience—a fund of experience commonly admitted without need of analysis to be unquestionably real. Within this common fund one would find, on looking for it analytically, Descartes' subjective principle, at least when stated in the form that subjective experience is a real entity; *something is going on* in the experiencing subject. But when Berkeley excluded "the realistic intuition" (that things known are independent of the knower and his knowledge)¹ and exclusively identified common convinced experience with the subjective principle, he went much too far. The normal human conviction of real experience which defines the empirical temper has always included "the subjective principle" and also "the realistic intuition."

However, when the spirit of empiricism vigorously asserted itself in recent philosophy, it inevitably followed the lead of the subjective principle and when it came up with the realistic intuition, it was placed by it in an equivocal position. This paper attempts to reveal this equivocal position in the case of William James, and then to make clear what disposition his empiricism, if faithfully followed, i.e., if kept "radical" or thorough-going, would make of the realistic intuition.

The empirical temper in the history of thought was an attitude to "facts" which held them worthy of the utmost intellectual respect. It took both a subjective and an objective direction. In the subjective direction, it was this spirit that delighted in the certainty experience gains in mathematical knowledge. It motivated Descartes' method of doubt which rediscovered the subjective principle. It motivated Locke's denial of innate ideas and led on to Hume's reduction of the world to *impressions*, or fragments of mentality.

¹ Henceforth in this paper when "the subjective principle" and "the realistic intuition" are referred to, the meanings here defined are intended.

But in the objective direction, it was the same spirit that held Locke to his realism with its illogical yet convinced notion of material substance. And the same spirit moved in Reid's appeal against Hume to common-sense principles reaffirming the realistic intuition, and beginning a logical analysis of perception which, in the twentieth century, was to establish the realistic conviction, for powerful movements of philosophy, as fundamental to the whole enterprise.

But the empirical temper found itself truly at home and its own logic emerging only when it issued in the field of psychology, where it inevitably moved upon the subjective conviction of real experience. We need not here trace its movement in this field in any detail. It began perhaps in Kant's doctrine of the primacy of the will and his postulations for the *needs* of moral experience, and in Schopenhauer's *will to live*; but it found itself in any fullness only toward the end of the nineteenth century, when the ideal of life's urgency, conation in general, tended to become regulative and to produce explanations of the rise of intellect and of science itself. Subjective experience, holding at its core inevitable conviction of immediate reality, was now freed from bonds to a formal knowledge-content presented in the simple analyses of Descartes and Berkeley; which led even Berkeley to innate ideas and naïve rationalism. A partial empiricism began to trace associations of ideas, and to analyse perception into "mind-stuff." But empiricism took up also a deeper and more significant lead; it began direct observation of experience itself in its primary and original level as "stream of consciousness," and life processes, and urges, upon which the processes of sense perception and cognition arise. Here empiricism beginning with the immediacy of the subjective principle remained immediate and "radical" throughout.

What is the full intent in this claim of immediacy of experience? It is, of course, that since in *the experience of process*—in the experience of what is really going on in the world—process itself has been traced to its lair in "matter" and discovered (not only as mental but also as physical) to be experience itself. That is to say, experience itself reports a knowledge which is immediate identity with reality both as mind and as matter.

But at this point empiricism, though eager to be thoroughgoing, has shown itself hesitant. It has not seen how to trust the clue of subjective immediacy quite whole-heartedly. Even Schopenhauer, who suggests the method first to the Occident, when he declares that will, desire, conation, is the clue to knowledge of real process in earth and wind and water and fire, feels himself drunk with soma from the Vedas and the Upanishads. He has moments of soberness when he is sceptical of physical and mental process as stages in one experi-

ence. Bergson's great literary powers lack a way to make convincing his doctrine of matter as a negative direction of the *élan vital*. William James is plainly non-plussed. They all have come squarely to face with the realistic conviction. Radical empiricism and new realism were born from the head of James, not full-grown, like Minerva, but tremendous infants grappling to throttle or to subdue each other. James, with a closeness to *event*—to what is *really going on*—that is radically modifying the occidental mind, seems often to be reporting the actual physical world, a continuum of process in which certain constant objects are "carved out" at need. But, as one reads, this appears only by a psychological attitude. It is only subjective process; and a world of reals, independent wholly of the subjective and so of experience, comes up at the call of the realistic conviction. "Pure experience," an immediate experienced reality inclusive both of mental process and of physical process alike, where unity and multiplicity could be discovered working together, was the name given by the author of radical empiricism to the *Ultima Thule* of empirical quest. But the founder of the new realism called the same *Ultima Thule* "neutral entities." In this the realistic conviction confused *experience* with *cognition* and by irrelevant tugging in of the analysis of sense perception at the deeper level of feeling, discovered that ultimate reality leaps beyond *experience*, whether mental or physical, to a "neutral" position. Let us attempt to see precisely what happened here.

The interesting point in the above development for empiricism as a method in philosophy is that it definitely goes beyond sensationalism or sense empiricism and becomes "radical" or *real* empiricism. It denies the position that all knowledge has its source in sense experience, a position which the empirical temper never was confined to, and it declares definitely that experience itself is the one test of truth and reality. It has the coöperation of the pragmatic theory of knowledge to take care of experience at the sense perceptual and intellectual levels; and it has really, as we shall definitely see in a moment, provided for the force of the realistic intuition here. But it remained unclear about this and hence was caught up with again by this intuition on the level of immediate or pure experience. This came about in the following manner.

It became possible to declare that experience itself is the one test of truth and reality, only because, in James' famous statement of the case, not only the *substantive* elements in knowledge, but also the *transitive* parts, are immediately presented in experience. The linkages that bind experienced entities into known unities are not "overarching" relations provided from a transcendental realm, but are immediately experienced. This yields a basis for correcting both

the realistic and idealistic attitudes to logic, which regard it, on the realistic side, as a kind of *faculty of analysis an sich* leaping beyond experience to independent reals, and, on the idealistic side, as a pure creative reason, giving unity to experience from above. Instead of this a thorough-going empiricism finds cognition complete to lie within experience and to be immediate experience.² The present writer has argued in a previous number of this JOURNAL³ that this immediate experience of the connections of knowledge itself, leads not to pluralism but to monism. This is because the transitive parts of experience are not merely piecemeal, but experience provides also more general "feelings of tendency" which persists toward complete unity. But the point significant for the empirical method in philosophy is that in these connections *experience* has extended itself underneath, or, better expressed, within, the knowing process itself and has taken into itself both the subjective and the objective and made itself the transition between them. Knowledge as subject leaps beyond itself to an object independent of it? Quite true. But it does not leap beyond *experience* to an entity metaphysically independent of experience. Among the provisions which experience itself yields for knowledge, is a relation between object and subject in which the object is genuinely independent of the subject. The realistic intuition of common sense reveals itself now as having been provisional and presents itself as a conviction of genuine objectivity within experience.

Following out our question as to precisely what happened at the founding of the new realism, we ask why James was not satisfied with this achievement of genuine objectivity within experience. The answer is that the realistic intuition was very strong in his nature, but not quite clear as to what need of the mind it intended. Subjective process, the feeling of activity, failed to register in his mind as the feeling of *physical process as such*; although this was plainly what his faithfully empirical attitude in psychology had found it to be. He himself did not escape the feeling (which almost the entire philosophical occident felt still more strongly and opposed to both his pragmatism and his radical empiricism) that this was psychology, somehow, and had little to do with metaphysics. Like a true occidental, he was unwilling to subordinate the realistic intuition to the subjective principle. Suppose the feeling of bodily process or activity be taken, in complete faithfulness to his empiricism to be verily the *experience of body*, experience of physical process *within the body*, there still seemed to him to lie beyond this immediacy of feeling, the *unfelt* processes in earth, air, water, etc.,

² F. J. E. Woodbridge, "Tangling Cognition," this JOURNAL, Vol. XXIX (1932), pp. 688 ff.

³ "Immediate Empiricism and Unity," Vol. XXX (1933), pp. 141 ff.

of the outer physical world. Schopenhauer and the spiritualistic tradition made the leap from felt process to the unfelt world by virtue of analogy. James did not see that he himself had discovered the bridge over that chasm, when he had included the world of nature in one experienced world-continuum where analyses of cognition revealed substantive and transitive elements arising at the need of conation. He had here given the subjective principle its true place in reality, and had really satisfied the force of the realistic intuition in the discovery of true objectivity in the analysis of cognition. But so great an achievement could not at once appreciate its own logic. The realistic conviction returned as an absolute and independent force, and changed "pure experience" into "neutral stuff," independent, not only of knowledge, but also independent metaphysically of experience, and falling indifferently into mental or physical categories. No wonder it was said that "experience" was no good term for James's primal entity.

This force, which thus divided the mind of James, which may rightly be called the *occidental* force of the realistic intuition, refusing to subordinate itself to the subjective principle, is perhaps nowhere so clearly evident as at a certain point in Professor R. B. Perry's chapter on "The Realistic Theory of Mind" in *Present Philosophical Tendencies*. James is here shown to have gone from sense perceptual and cognitional levels of experience to reflect on *the feeling of process* in bodily organs, brain or sense organs, and to have found the basis of higher forms of experience, such as mental activity and personal identity, there. Perry objects that "a consciousness of 'intra-cephalic movements' and of the movements of an external body—a unity of consciousness in which these are present together—can not derive its unity from a consciousness of one any more than from a consciousness of the other. Both movements (the subjective movement and the movement in the thing outside of and essentially independent of experience) must be subtended by some action that operates on them jointly."

The true solution of the matter, he says, is near at hand. "If, instead of defining mental action in terms of *feeling* of bodily activities, James had defined it in terms of bodily action itself, as he sometimes appears to do, these difficulties would have been obviated. But this would have been to have abandoned the introspective method."⁴ Then Professor Perry goes on to show the necessity for the objective method in the study of mind.⁵

⁴ *Present Philosophical Tendencies*, pp. 283 ff.

⁵ The present writer has attempted to show in an article entitled, "The Primitive Mental Attitude and the Objective Method in the Study of Mind" (*Monist.*, July, 1933) that the objective method reveals its usefulness in leading, not to realistic pluralism, but to monism.

The fact here mentioned of James's apparent definition of mentality in terms of bodily action instead of the feeling of bodily action and at the same time his unwillingness to abandon the introspective method is more evidence in James of conflict, conflict between "the subjective principle" and "the realistic intuition." At this *Ultima Thule* of empiricism, James has reached the point where the apparent leap from subject to object has already been revealed, as above explained, as the independence of the object on the subject and not as either the dependence or the independence of the metaphysical thing on experience entire; and having been revealed as such is passed beyond, and the further analyses of experience on the more primitive level of felt process has been taken up. But, upon this further analysis, body and mind are found to be unified in the experience or feeling of bodily process or "action" in which the transitive element between object and subject (body and mind) is revealed as no longer transcendental but experienced. But at this point the whole procedure is made of none effect. For the *experience* of process is (by force again of the realistic intuition) taken to be *bodily* feeling or intro-cephalic, or intro-tegmental feeling and is again opposed to an extra-bodily process, *unfelt*, or *beyond experience* which must be brought into experience or knowledge before the problem of subject-object mind-matter is solved.

The error is that of repeating, at the level of experience of process, the analysis of sense-perceptual or intellectual cognition. In such cognition, the object is independent of the subject though both are linked by a transitive *feeling* or experience. But repeated at the deeper level of experience, or feeling, such an analysis seems to show the subjective or known to be alone the *felt* or experienced and the objective to be an *unfelt, unexperienced* something that can float unaffected in and out of experience. One must move another step away to an outside philosopher with an "objective method" of getting these things together again.

The fact is that it was difficult for vigorous occidentals like James, and his followers on his new-realistic side, to take subjective process for what it genuinely is, the feeling or experience of process, not merely bodily or "intra-cephalic" or "intra-tegmental," but *physical*, extending from the outer world and flowing toward the body as to one pole from another, and at that pole, *felt*, lighted up in experience, immediately perceived.⁶

Had James been as fully steeped in Vedic and Upanishadic lore

⁶ Physiology is now discovering that the embryo in its growth as the organism in its learning is at one end of a bi-polar process. See C. M. Child, *The Origin and Development of the Nervous System*; quoted in F. C. S. Northrop, *Science and First Principles*, pp. 219 ff.; also in E. B. Holt, *Animal Drive and the Learning Process*, Chaps. 2, 3, and 4.

as was Schopenhauer, he, with his advanced psychological empiricism, might have found a very simple means by which to render this analysis of experience the most natural thing in the world, and of allaying the false occidental force of the realistic intuition. The simple means I refer to is the seemingly almost childish Upanishadic and Vedic philosophy of food and breath. But the manner in which this naïve position is arrived at, and its application to perception and intellection, are important.

In order to make this point clear, it may be worth our while to interject here a brief study of the basic attitude of philosophy in the Upanishads and of its origin in the more primitive Vedas.

We have characterized the extreme force of the realistic intuition as occidental. No better expression could be given to the central difference between East and West than this. The East felt from the beginning the force of the subjective principle so profoundly that it has tended to dominate both thought and practice; while the force of the realistic intuition has been, in spite of idealistic philosophy, dominant in the West. In this the East has shown the more profound faithfulness to genuine empiricism. If such a statement seem strange to Western ears, it is for the reason that Western common sense has, because of practical materialism, given the realistic intuition the force of a much deeper position in reality than it can rightly claim.

Now it has become clearly evident that in India, as also indeed in China, philosophy built itself squarely upon primitive common sense, the common sense of Central Africa or of Australia to-day, which is essentially the mental attitude revealed in the Vedas.⁷ Now, it is interesting to discover that while, into modern common sense sophisticated notions have infiltrated, the most nearly primitive and naïve common sense is most purely or "radically" or "immediately" empirical. Is this not precisely what is to be expected? Instead of studying unformed infants for the beginnings of mind, should we not rightly study the adult mentality of earliest most naïve groups of men?

What is most clearly evident is that early mentality on our planet did not feel the force of the realistic intuition, but rather of the subjective principle. The prevalent dogma of modern anthropology and sociology, drawn with so much confidence from the realistic intuition in modern occidental common sense—the dogma that primitive man was first engrossed in particulars which he inevitably regarded as real—can be said with still greater confidence to be simply

⁷ It was Preuss who first identified *brahman* and *mana*. See Jane Harrison, *Themis*, p. 72. Professor James H. Wood of Harvard in courses in Indian philosophy makes this identification. For a similar identification of *mana* with *φύσις*, cf. Cornford, *From Religion to Philosophy*, p. 89.

erroneous. Its impossibility would appear at once if ever the attempt were seriously made to explain the rise of philosophic universals in India or in China or in Greece from a naïve realism.⁸ But the assertion that the subjective principle is the "naïve" principle and that the realistic intuition arises within its scope, will be confirmed in any mind who will apply it to trustworthy reports of the beliefs and behavior of contemporary savage peoples, or to the *Yih King*, or best of all to the Upanishads which are a contemplative development of the primitive mental attitude reflected in the Vedas. Not the realistic intuition, but the subjective principle, marks the initial mental attitude of mankind.

The most forceful evidence that Vedic common sense was dominated by the subjective principle is seen in the fact that a conational and emotional attitude to things was prior to self-conscious perception and intellection which stresses definite objects and perceived qualities. This stage of primitive life is well known as the shape-shifting stage of mentality. Men are using and are aware of many objects. They have even many tools and artefacts. Perception is vivid and things are named and classed. But all things are classed by means of felt *conational* essences, not of *sensed* similarities. There is a certain "inner doing" (*mana*) in things which marks their affinities.⁹ The outward forms may metamorphose, shape-shift, in many ways yet the *being* remains the same. Things of vastly different outer form may have the same "inner doing." Moreover these various "inner doings" were in reality *one*; the intellectual form of unity is to be found present with overwhelming force though evident only in behavior and not in awareness. But there is not space nor is this the place to develop this fact.⁵

With the primitive mind thus focussed on inner process, there are certain phenomena that come most vividly to attention. One is fire; another is the digestive process. "All things are exchanged for fire and fire for all things." In fire, process, "inner doing" is most evident. Fire swiftly releases essential being by breaking down the accidental form perceived. Hence Agni (fire) is the great altar god who feeds all the gods and "strengthens the Rita" or order of nature since fire is the digestive process of divinity. Fire in the Vedas is one with the digestive process in man.¹⁰ Primitive restrictions on food are motivated by the desire to strengthen tribal conation or inner doing, which, by whatever people, is regarded as cosmic conation (*mana* or *brahma*) and the fear of mixing "inner

⁸ Professor Dewey suggests that they originate in an imaginative reproduction of temporary and functional ends and finalities.

⁹ See Durkheim et Mauss, "Classifications primitive," *Année Sociol.*, VI.

¹⁰ R. V., I, 7, 8; I, 95, 2; I, 37, 7, etc. Cf. H. H. Wilson, *Rig Veda Samheta*, Note for R. V., I, 59.

doings" disastrously, is like the fear of modern realistic common sense to mix fire and gun powder. But it is the "inner doing" of yams in Mellanesia or of any food in the Vedas that is released by breaking down of forms to enter a new form. The conation in the heart of the enemy brave is released, as they eat it, in the stomachs of American Indian warriors by the inner fire (digestive process).¹¹ Water presents the same process as fire—life arises in it. Earth is used in the Upanishads as synonymous with food which fire reduces to reality. But air is more refined food, nearer the *brahman* itself, the "imperishable puller within" the essential being of the cosmos drawing all inwardly into one Brahma.¹² The practice of deep breathing is due to this belief.¹³ Breath is drawn in as food is taken. In both processes reality in cosmic process is immediately grasped in man's experience. Food needs a fire-process to release its conational essence. Breath or air is more nearly that essence itself. Breath (mind, speech, and breath) are the "food" the "father" made for himself.¹⁴

It is here then in the Vedic and Upanishadic philosophy of food and breath¹⁵ that we find suggested the course that genuine faithfulness to the empirical principle in philosophy will take. *Subjective realization, feeling of activity*, is *en rapport* with the objective universe because the latter flows into it and is revealed or lighted up there in feeling or experience.¹⁴

It is because they start with attention oriented on process and the centering of process in conscious centres that they conceive of the senses as *pranas* or "breaths."¹⁶ For they are processes flowing in at eye or ear or tongue or skin, etc. They are finer breaths. These finer breaths or precesses are drawn in by "the puller within" or tension to unity.¹² As a certain process flows in at eye, or ear, or tongue, it remains one process (not part inner and part outer) and the *feeling* in which it passes from the objective to the subjective pole and becomes light or sound (in a certain voluminousness or pattern or kind, according to the entire process in question) is not the experience of "intro-cephalic" or "intro-tegmental" activity, but the *feeling of physical process* entire. Out of the total process thus experienced rise subjective and objective poles. The latter called

¹¹ William Jones, *Journal of American Folk-Lore*, pp. 18, 183-190, in W. I. Thomas, *Source Book of Social Origins*, p. 686.

¹² *Brihad Up.*, III, 7, 2.

¹³ *Brihad Up.*, III, 1, 10.

¹⁴ *Brihad Up.*, I, 5, 1 and 3.

¹⁵ *Khand. Up.*, VI, 7, 6; VI, 9, I; *Ait. Aran. Up.*, II, 3, 1, 2; II, 3, 3, 3f; II, 4, 2, 4; *Mund. Up.*, I, 1, 8 and 9, where all matter is food; *Tait. Up.*, I, 1; III, 1 and 2; *Brihad. Up.*, I, 5, 1 ff; II, 2, 4, etc., etc.

¹⁶ *Brihad. Up.*, I, 5, 21, where an explanation is presented why the senses are called "breaths" (*pranas*).

in the Upanishads and Buddhistic writings "name and form" (the Hindu designation for percepts and essences). In this relation of subjective and objective as related parts of the experience of cognition, the realistic intuition has its true origin. And here percept and essence, "name and form," do not arise apart from each other,—essences apart from existent percepts in some subsisting logical realm,—but in ontological immediacy with them. Percepts and concepts are themselves elements in immediate experience and cognition is a type of immediate experience. As immediate experience, knowledge is not a problem. But the so-called problem of knowledge is rather a problem of objective science, tracing relations in the field of knowledge.² But knowledge is the immediate feeling of its own entire process or field both intra- and extra-cephalic.

However, when we go back again behind the rise of objective and subjective within experience to its more primitive basis, the realistic intuition has the force only of the objective awareness that food and breath and the processes underlying light and sound and taste flow into the body from a cosmos external, not to the mind, but to the body. This only presents the obvious starting-point for the philosophy of mind and body, mind and matter—an observation whose importance appears only when empiricism, having passed through great sophistication, has become again immediate and naïve. The inevitable presupposition that matter is of like kind with mind then appears since matter flows toward mind in a movement from objective to subjective poles and in a day or two, even as gross matter (food), becomes thinking mind—poetry or philosophy or eager quest.

Hence by faithfulness to the empirical method in philosophy, the idealistic and realistic tendencies in the empirical temper of modern common sense, the subjective principle and realistic intuition, are no longer in conflict but are discovered in their relative stations—the first as primal experience and the second as provisional, rising in the feeling of true objectivity within experience process.

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THE COMMENSURABILITY OF VALUES

INSTRUMENTAL values are obviously commensurable. Whatever practical difficulties may be involved in choosing means to an end, all possible means to any given end are capable of comparative evaluation. Hedonistic values are, I believe, in principle commensurable, though an accurate hedonistic calculus would doubtless be too complex for practical life. Setting aside these two types of value, I wish to examine the inter-relations and intra-relations of

three spheres of intrinsic value, *truth*, *beauty*, and *virtue*, in an attempt to determine the extent and limits of their commensurability.

I assume that there are these three spheres of value, and that truth and beauty are distinguishable, as values, from the moral value of intellectual and esthetic culture. The question of the commensurability of these three spheres of value with each other, which I shall discuss first, is, it should be noted, a purely theoretical question. The practical problem of the possibility of significant choice arises only *within* the moral sphere. Much that has been written on commensurability is, it seems to me, confused by failure to exclude purely moral considerations and criteria from this part of the general problem.¹

There would, of course, be no confusion, but rather a very doubtful theory of value, if it were assumed from the outset that virtue is the only intrinsic value. Frequently, however, a plurality of intrinsic values is allowed, and virtue then elevated above all other values through an appeal to moral intuition or experience. The moral criterion may be disguised as an appeal to intuition or experience in general. The fallacy is transparent. Virtue is, of course, morally preferable to any non-moral value. It is quite a different problem, whether the moral value of intellectual esthetic culture is by nature of less value than some other aspect of virtue. This will be discussed later. I myself possess no intuition or experience suggesting any order of precedence or worth among these general spheres of value; I will, consequently, have no more to say of these possible sources of insight into the question.

Commensurability may, however, be argued from other and, I think, better premises. If it is assumed that values have cosmic roots, that they gain their worth and power from the nature and meaning of the universe, then criticism and evaluation of values is a function of metaphysics, and our ultimate hypotheses concerning the nature of the universe may supply us with criteria of the commensurability of spheres of values.

If, for example, the world is a logically ordered structure and its logical order is its final meaning, truth, of all valuable finite things, would appear to be closest to the heart of reality, and highest in the hierarchy of values. Morality, because it is bound up with an undue concern for the situation of the finite individual and involves the essentially finite conception that value is something which ought to be, not something which is, gets from this point of view a relatively low place in the scale of cosmic worth.

¹ W. D. Ross, *The Right and the Good*, pp. 152-153; Hastings Rashdall, *The Theory of Good and Evil*, Vol. II, pp. 37-50; John Laird, *A Study in Moral Theory*, pp. 51-61.

But, on the other hand, if the ultimate category be goodness or individuality, the law of the universe seems manifest nowhere in finite experience so fully as in the morally responsible human individual. From this point of view, truth and logical system may appear abstract and barren, and satisfaction in the artificial perfection of beautiful things a cowardly way of escape from the moral struggle toward *real* perfection. Finally, if the universe should be conceived to be a unity too subtle to be subsumed under the categories of logic, beauty would be its most adequate finite manifestation. From this point of view, logical truth is barren, and morality is at war with the divine fitness of things as they are.

The reader will doubtless take exception to this carefree sketching of over-simple metaphysical standpoints. He may have ready the further criticism that the categories I have proposed are at the best undemonstrated hypotheses, hardly more than metaphors, through which we try haltingly to think about the ultimate nature of things. I agree. I would say furthermore that each of these categories expresses some real possibility about the structure of the universe, and hence that, in the present state of metaphysical knowledge, none of them can be dispensed with.

If this is the true state of affairs, we can expect no reliable criterion of the commensurability of values from metaphysics. For, besides the fact that there is a plurality of hypotheses, each having a certain validity, from which different orders of value-precedence may be inferred, there is a second fatal difficulty. The connection between each of these hypotheses and the value which it seems to elevate is itself no more than metaphorical.

It seems reasonable, in the absence of intuitional or metaphysical evidence to the contrary, to assume that the spheres of value, *truth*, *beauty*, and *virtue*, can not be arranged on an ascending scale. I will not say that they are *incommensurable*, although the word is sometimes used to mean simply the absence of a hierarchy. For, strictly speaking, if values have a sufficient identity to justify a common name, they are formally commensurable. If one value is not more or less valuable than another, the two are formally *equal*. The spheres of intrinsic value in question are, I believe, equal in value.

Spheres of value being formally commensurable one with another, particular cases of value from different spheres are also commensurable. But the equality of the spheres does not establish the equality of cases drawn from different spheres. The actual quantitative relation between cases depends not only on the relative value of the spheres, but also on the relation as to value between cases within each sphere. If all truths are equal in intellectual

value, if all beautiful objects are equal in esthetic value, if all virtuous acts are equal in moral value, then any truth whatsoever is equal in value to any thing of beauty or to any good act. If this is absurd, then there must be more and less valuable truths, beauties, and virtues, measured by the ideals of truth, beauty, and virtue.

The question of commensurability within each of these spheres must then be answered before it can be determined what sort of quantitative value-relations may exist between particular things of value from different spheres of value. I shall begin with *virtue*. It must be noted in the first place, that the commensurability of moral value is not established by the fact of choice.² A choice between moral alternatives may or may not be grounded in a real difference in value between the alternatives. If all virtues were, *per impossible*, incommensurable, or if all were equal, choice would, none the less, be necessary in practical life. All sorts of artificial devices would doubtless be utilized to clear the way for action. Coins would be flipped, diviners, oracles, and fortune tellers consulted, and particular moral values elevated arbitrarily into infallible gods. The fact that such devices actually do play an important part in practical life should lead us, not indeed to the conclusion that all moral values are equal, but to a critical attitude toward customary modes of choice. If there exist any recurring conflicts of moral values, where the poles of the dilemma have equal or nearly equal worth, custom, always practical-minded, will have decided the question, and given its decision an emotion force roughly proportionate to the reality and seriousness of the conflict.

Virtue is made up of several distinct realms of moral value (corresponding to the several spheres of non-moral value which constitute the ends of moral action); e.g., intellectual culture, esthetic culture, social morality, etc. Three distinct types of comparative evaluation may therefore be made within the moral life: (1) between acts within the same realm; (2) between realms, taken generally; (3) between acts from different realms.

(1) Moral acts within the same realm are commensurable through a criterion similar to that of the commensurability of instrumental values. There is an identical concrete end, and the best instrument and the best act for the end are to be chosen. Should two possible acts of equal value for the realization of the end present themselves, there is no real moral conflict. The moral obligation is to do the best possible for the end, and it is always best to do something. Hence, an arbitrary choice can be made without loss of moral worth to the act. When the equal alternatives are within the same realm of moral value, arbitrary choice is a moral obligation, not a mere vital

² As Rashdall seems to think, Vol. II, p. 39.

necessity, as it is when duties from different realms conflict.³ Whether choice between obligations within the same realm is in fact always arbitrary, or whether there exists a hierarchy of value within each realm, can be answered only through determining whether there exists a hierarchy within the sphere of non-moral value involved as end in each realm.

(2) Intellectual and esthetic culture, considered as realms of virtue, must be equal in value if the non-moral ends, truth and beauty, are equal. This moral equality applies, I assume, to all distinguishable realms of virtue, because each realm has its end in a sphere of intrinsic non-moral value. And all intrinsic values may claim, on the same negative evidence, equality in value. Society, for example, I take to be an intrinsic non-moral value, and social morality a realm of virtue.

(3) The commensurability of particular moral acts from different realms depends upon two factors, the commensurability of the realms in general with each other, and the commensurability within themselves of the spheres of non-moral value involved as ends. If all realms of moral value are equal, as I assume, and if all particular non-moral values are equal within their spheres, then all particular moral values are equal. But if there exists a hierarchy of values within spheres of non-moral value, then moral values from different realms may be more or less valuable. It follows also, of course, that moral values within the same realm may be more or less valuable.

It appears, then, that the question whether a relation of more or less exists anywhere between intrinsic values can be reduced to the question whether a relation of more or less exists within each sphere of non-moral value. Our discussion of the commensurability of particular values from different spheres of value ended with the formulation of the question whether particular values within the same sphere of intrinsic value could be related as more or less. And our attempt to answer this question within the moral sphere has further delimited the general problem. Moral values can be related as more or less valuable only if non-moral values within the same sphere can be so related.

I pointed out above that the problem of the commensurability of values is a purely theoretical problem, in the sense that it is not to be decided by moral or practical criteria. We see now that the problem is crucially practical, in the sense that upon it depends the concrete structure and meaning of the moral life. It is worth while to consider the practical consequences of the alternatives.

The consequences of the hypothesis that all non-moral values are

³ Cf. pp. 463-464.

equal within their spheres clash seriously with our conventional habits of ethical judgment. An extreme case will illustrate the shocking moral implications of the hypothesis. If there does not exist a hierarchy of truths and a hierarchy of functions within society, there can be no significant choice between: (1) the acquisition of a bit of curious information, such as how a particular individual would react under torture; and (2) the social obligation to respect the person of our fellow citizen. Our feeling that a significant choice can be made in such a case can hardly be due to social fanaticism. Some of us at least would be equally sure that significant choice were possible in favor of non-social morality, if the case of torture in question were a crucial experiment that would demonstrate or refute, say, the theory of evolution. Whether or not we have a right to do so, it is obvious that in making these judgments we presuppose that there is a hierarchy of value among truths and among functions in society. It would be easy to show that we also presuppose in moral judgments the existence of an esthetic hierarchy.

This type of moral judgment upon non-moral values differs fundamentally from the attempt, criticized at the beginning of this paper, to establish a hierarchy among spheres of value through a moral criterion. Here the moral consciousness seeks in non-moral spheres of value a criterion for practical choice, and what it seems to find has the appearance, at least, of the responsible verdict of reality. It is, of course, possible that the hierarchies of non-moral value which it seems to find are practical fictions, set up along with other devices to clear the way for action. But this is very unlikely.

Action is better served by the less subtle fiction that the particular value in which one's dominant life interest is oriented is alone of intrinsic worth. As a matter of fact, the hypothesis in question serves action very badly. The moral conviction that significant choice between obligations is possible generates not practical decisiveness but tragic conflict, anguish of soul, and moral uncertainty. The general conviction that significant choice is possible does not solve particular moral problems. Rather it creates problems that stand in the way of action.

Such conflicts are most palpably serious where the value of the alternatives seems to approach equality. But there is some element of conflict for morally sensitive individuals wherever both alternatives have positive moral worth—even where the alternatives are far apart on the scale of value and the right choice is certain. Since the act rejected is good its rejection is morally wrong, and the greater good chosen loses moral worth proportionate to the value of the rejected good. If the alternatives are equal in moral value, the choice is arbitrary and without moral worth, although the will is directed

solely toward the good. Unless tragedy is a delusion, this is a real paradox of the moral life. I have already pointed out that such conflicts are possible only between acts from different realms of moral value.

The discussion of the presuppositions of the moral consciousness has, I believe, revealed a presumption that hierarchies of value within spheres of non-moral value do exist. The evidence of esthetic experience and theory and of social life and theory supports this presumption. (There are, I suppose, radical relativists in esthetics who would deny that things are more or less beautiful. I do not anticipate any objection from social theory. Radical democrats might, perhaps, be suspicious of some of the implications of a hierarchy of social functions.)

The crucial test is *truth*. The idea that truths may possess different degrees of intellectual value involves the coherence theory of truth, to the extent that it involves the idea that truth is a totality, a whole of knowledge; and that scattered, fragmentary truths are not valuable in themselves as atomic knowledges, but are to be judged by the ideal characters of *the truth*, coherence and universality.⁴ By these criteria only can any distinction in intrinsic worth be made between the two knowledges cited above, the satisfaction of an idle curiosity concerning the behavior of a particular person under torture, and the demonstration of the theory of evolution—or between the moral values of the pursuit of these two truths.

It is beyond the scope of this paper to discuss the rival theories of truth. I shall only point out that we need not subscribe to the more extravagant idealistic inferences from the coherence hypothesis in order to allow all that the moral consciousness demands. We may recognize a pervading identity of the logic of thought and the order of things, without admitting that thought is identical with things.

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BOOK REVIEWS

L'idée du droit social. GEORGES GURVITCH. Paris: Recueil Sirey. 1932. ix + 713 pp.

Le temps présent et l'idée du droit social. GEORGES GURVITCH. Paris: J. Vrin. 1932. xvi + 336 pp.

These two works by the author of *Les tendances actuelles de la philosophie allemande* and *Introduction à la théorie générale du*

⁴ Ross, pp. 147–149; F. H. Bradley, *Principles of Logic*, ed. 2, Vol. II, pp. 685–688. Cf. also Laird, *The Idea of Value*, p. 357.

droit international sketch a sociological theory of law. The author's thought is a part of the century-long reaction which has been taking place in Continental jurisprudence against the optimistic individualism of the eighteenth century as embodied in the Napoleonic Code. Currently confronted with the stresses resulting from a rapidly developing technology, with expanding vocational, economic, and international groupings producing grave social instability, how can the jurist rethink legal relations in a way which will minimize disorder, provide social discipline, and yet not harm the spontaneity of group life? This is the problem for M. Gurvitch, and his answer is his concept of *droit social*, a "law" which he urges us to discover beneath positive laws, governmental injunctions, the spontaneous activities of groups and the researches of jurists. Is there a "pure and independent social law" below the level of the conflict of laws which guides and facilitates the emergence of a new and pacific social order in which individuals will be integrated by means of sub-national, and national groups, and finally reconciled in super-ethnic groupings? M. Gurvitch thinks there is, and writes most convincingly to justify his position.

The first book, *L'idée du droit social*, after a theoretical introduction which emphasizes the need for rethinking the whole field of jurisprudence in terms of the category of *droit social*, reviews legal theories from the seventeenth century to the end of the nineteenth century. Special expository and critical emphasis is put upon Proudhon, the Germans culminating with Gierke, and such French contemporaries as Duguit, Saleilles, and Hauriou. The second book, published prior to the other, but logically a part of the first, discusses current developments in labor law and in international affairs. The theories of Krabbe and Kelsen are criticized and the League, the International Labor Office, and the Permanent Court of International Justice are treated in relation to the concept of *droit social*. A third section expounds the positions of M. Gény, of M. Eugene Erlich, and of the Russian writer, M. Leon Pétrasizky.

From the point of view of the student of social theory these two books furnish a most interesting, subtle, even elusive, utilization of that "natural law" method of legal thinking which has become progressively out of fashion in Anglo-Saxon circles since the days of Jeremy Bentham. M. Gurvitch points out that extra-governmental totalities develop their autonomous law and thereby limit the state, internally by economic groups and externally by international groupings. Labor law and international law, both of which are compelling and operative upon individuals and groups, have grown up as extra-legislative bodies of rules, and now confront the juristic state as *faits accomplis*. These are two branches, he asserts, of the "living extra-legislative law," the *droit social*.

We may well ask, what does this mean? Is the assertion that these two developments are part of a supposititious *droit social* meant to justify them? If so, exactly what future developments will be so justified? All of them? If not, which ones? Why? Such questions point out the scientific inutility of all "natural law" antecedent wholesale justificatory ideas. They can never be more than glorified propaganda weapons, useful only in making necessary change a little more palatable to conservative minds. Perhaps M. Gurvitch performs a considerable service at this point in furnishing conservative jurists a scaffolding of legal terminology to facilitate intellectual reorientation.

The felt need of justification in an age of rapid change has always been the source of "natural law" ideas. The notion of *solidarity*, of M. Duguit, whom M. Gurvitch criticizes, might make it easier for a French judge on the bench to make, and have accepted, a novel decision involving downright legislative innovation apart from the functioning of the Chamber of Deputies. But it could not tell him precisely which decision to make. Antecedent wholesale justifications are of no help in the precise recasting of social rules; M. Gurvitch's hypothesizing of a "free" and "living" sociological abstraction as a source and justification for legal developments is no exception.

Without diminishing the credit due him for a trenchant and scholarly work, is it not pertinent to suggest that the only acceptable justification for all legal arrangements and decisions lies not in their origins and antecedents, but in their consequences? Behind all rules there lies not a *droit social*, a *droit en général*, nor any other juristic element, natural or otherwise, but simply the fact of ordered adjusted human behavior. When conflicts arise we try to invent formulas which will aid in the constructive resolution of them; we invent and preserve techniques of readjustment. So it was that the modern state itself emerged as a juristic unit, as an organ of collective human activity, justified in discourse by many a specious argument, but ultimately validated only by its fruits in operation. New and different organs are now emerging. The primary need, however, is not for a new terminology for sources, however pious it may be, but for a technique to reveal specific consequences. There can be no substitute in legal thinking for scientific methodology, however difficult it may be to develop. We do not need doctrines of categorical emergence, or other systems of a pre-scientific sort; the competency and validity of the method employed is the whole story. A clear statement of the function of intelligence in social affairs is an indispensable prerequisite to an adequate jurisprudence.

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Moral Man and Immoral Society. REINHOLD NIEBUHR. New York: Charles Scribner's Sons. 1932. xxv + 284 pp.

"Neither the prophets of Israel nor the social idealists of Egypt and Babylon, who protested against social injustice, could make their vision of a just society effective." It is this awareness of the usual futility of social reformers that leads Mr. Niebuhr into this sharp and brilliant attack on the prevailing sentimentalities of "those moralists who imagine the egoism of individuals is being progressively checked by the development of rationality or the growth of a religiously inspired good will."

In the course of his polemic he takes occasion to criticize three groups for their unrealistic optimism. In opposition to the educator who believes that social injustice can be resolved by moral and rational suasion, he insists that reason is always, to some degree, the servant of interest in a social situation, and that therefore conflict is inevitable, and in this conflict power must be challenged by power. The social scientists are equally blind to the facts in the situation. Their favorite counsel in a conflict is for both parties by conferring together to moderate their demands. But, asks Mr. Niebuhr, "will a disinherited group, such as the Negroes for instance, ever win full justice in society in this fashion?" Or how are industrial workers to deal with industrialists who possess so much power that they will listen to no arguments?

And, finally, he levels his attack on the religious idealists who hope that a revival of religion will make conflict unnecessary in the future. He has little patience with the "average liberal Protestant Christian" who "is still convinced that the Kingdom of God is gradually approaching."

His is a strong reaction against all moralistic, sentimental appeals; he insists that power be put back of ideals, that no *a priori* assumptions as to the injustice of force be allowed to prevent an impartial survey of our actual situation. In all this he seems to be closely in line with usual Marxian analyses, and this is especially true of his insistence upon the difficulty of depending upon democratic, peaceful means for solving industrial conflicts.

He makes an interesting suggestion as to the sources of the respective morals of the middle class and proletarians. The former, because of their financial stakes in the social order, will stress the importance of peace and obedience to law, the latter having no vested interests will believe that conflicts of interest between groups can be resolved, not by accommodation but by struggle. He points out how society has always preferred peace to justice and has condemned those who would upset the *status quo* even on behalf of a more just solution.

In all this analysis of class divisions and the standards developed by each there would seem to be an assumption that morals are a function of the physical and social environment, and that, therefore, the way to effect a different code of morals would be to modify the existing institutions. But he does not follow out this line of argument because of his deep-rooted dualism, a dualism which is reflected in the title of his book.

His major thesis is that "a sharp distinction must be drawn between the moral and social behavior of individuals and social groups," and "that this justifies and necessitates political policies which a purely individualistic ethic must always find embarrassing." The egoistic impulses in man may be controlled in personal relationships, but not among groups. It is because of this fact that we can not depend upon strictly rational solutions. He is not altogether contemptuous of intelligence, but he feels that faith in it is a fruit of the Enlightenment, and that later history has shown it to be by no means justified.

However true this may be, one may question whether it is his historical observation which determines his conclusions so much as his dualistic premises. It is not strange that he should find reason impotent when he puts it over against impulse in the sharpest possible way. The force of egoistic impulse is so much stronger than reason as to make it a hopeless battle. If he saw reason as a means of so controlling and directing the impulsive drives as to give them more adequate expression, he would not only have more faith in the rational approaches, but more interest in those experiments and techniques designed to further this end. With his premises, it is impossible to find motives adequate to meet the selfish impulses.

I do not want to lapse into any easy optimism. Mr. Niebuhr's pen is too sharp to make me want to lay myself open to attack. It is all too true that "a careful study of the history of political and economic life proves conclusively that the educators, as all other middle-class moralists, underestimate the conflict of interest in political and economic relations, and attribute to disinterested ignorance what ought usually to be attributed to interested intelligence."

But one may question the validity of premises which lead him to say that "the insinuation of the interests of the self into even the most ideal enterprises . . . makes hypocrisy an inevitable by-product of all virtuous endeavor." No doubt this is frequently true, but he assumes that it is inevitably so, that in all cases there is the same self, a narrowly egoistic self. He does not recognize that this is not only a description but a challenge, that it is at this point that education finds its task and its opportunity—the development of

selves which *can* be insinuated into moral enterprises and there furnish an impetus to effective idealism. If the self is as static as he seems to imply, then there is little possibility of finding a group morality which does not have conflict as its inescapable basis. But that question has not yet had its final answer, and a dogmatic reply is as out of place on the one side as on the other.

His radical dualism comes out most strongly in his concluding chapter where he gives a final résumé of the conflict between individual and social morality. Social control must be attempted, but conflict is inevitable. No Augustinian dichotomy between flesh and spirit could be sharper than the one he propounds. On the one hand is spirit, and spirit has no concern with social issues since its essence is utter self-abnegation. "Nothing is clearer than that a pure religious idealism must issue in a policy of non-resistance which makes no claims to be socially efficacious." It is left to the flesh to act in a politically realistic fashion even though that be diametrically opposed to a religious morality. The latter, according to Mr. Niebuhr, tends to perpetuate injustice by discouraging self-assertion against the inordinate claims of others, while a political morality justifies not only self-assertion, but the use of non-rational power in reinforcing claims. The only solution is "to accept a frank dualism in morals."

And yet this conclusion must not, can not be frankly faced. He feels that men must have the illusion that the collective life of mankind can achieve perfect justice. "Nothing but such madness will do battle with malignant power. . . . The illusion is dangerous because it encourages terrible fanaticisms. It must therefore be brought under the control of reason. One can only hope that reason will not destroy it before its work is done."

In reading those closing words a phrase of Santayana came to mind where, in describing the work of Aristotle, he said: "the conception of human life is perfectly sound, everything ideal has a natural basis and everything natural an ideal development." It is to be regretted that Mr. Niebuhr has not found some way of placing in dynamic relations his two realms so that there would be less danger of the ideal being raised to the unattainable, and the real of degenerating to the undesirable.

LAURENCE SEARS.

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The Revolt of the Masses. JOSÉ ORTEGA Y GASSET. Authorized Translation from the Spanish. New York: W. W. Norton & Co., Inc. 1932. Pp. 204.

The Modern Theme. JOSÉ ORTEGA Y GASSET. Translation from the Spanish by James Cleugh. New York: W. W. Norton & Co., Inc. 1933. Pp. 152.

We have in these two books the not uncommon combination of fresh insight and dogmatic assertion. Señor Ortega has attempted to probe beneath such everyday labels as rationalist, radical, democratic, revolutionary, and to re-interpret all human history in the light of what he considers the most fundamental factor of all, namely, vitality. His method is to strike out boldly, caring less for the accuracy than for the effectiveness of his ideas, with results that are irritating but refreshing.

Of the two books *The Revolt of the Masses*, written before the establishment of the Republic in Spain, is the less complete and less mature. In this earlier book, the author, who is a member of the Spanish Parliament as well as professor of metaphysics at the University of Madrid, sets forth his "radically aristocratic" interpretation of history: that leadership in society not only should be but always is from the top; otherwise there is chaos. Consequently he is genuinely alarmed to watch what he calls the "vertical invasion" of our civilization by "barbarians" from below; that is, the self-conscious coming into power of the masses who are incapable of any understanding of the principles that lie at the basis of a civilization, and who are therefore incapable even of continuing, let alone advancing, our civilization of to-day. Only if the countries of Europe burst through their present nationalistic bounds and move forward as a united Europe, which is their manifest destiny, and which would consequently allow a tremendous release of vitality, can leaders and followers again take their rightful places and civilization be saved from its own masses. This whole thesis is based on his assumption of a cleavage between an invaluable few and a hopeless multitude, an assumption which the reviewer, for one, would question.

In *The Modern Theme* the author sets forth in more philosophic terms the nature of the great task confronting the present generation. It is to overcome the age-old duality in life of reason and spontaneity, of the rational and the vital. The tragedy of Europe to-day is that the West, in contrast to the East, has since the day that "in the market-place of Athens, Socrates discovered reason,"¹ attempted to live according to this pure reason in disregard of life. Reason sets itself up against life because while thought is one of the biological functions of an organism, it is the nature of thought at

¹ *The Modern Theme*, p. 54.

the same time to transcend the individual organism and grasp objective reality. Truth, not biological utility, becomes the standard.

In the same way various other vital functions, volitional and emotional, transcend their biological origins and acquire independent status and value. They are recognized as ideals, and have a regulatory claim on life quite apart from their original utility. It is these transcendent vital activities which Señor Ortega believes constitute *spiritual* life, or culture. The cutting off of culture from its vital roots, which leads to extreme rationalism and "utopianism," is the result of this setting up of standards other than life itself. This is understandable, in view of the fact that living consists in "giving attention to what is not life,"² but nevertheless it is a tragic mistake, and one that the crisis of our times calls upon our present generation to correct. Life itself must be recognized as the ultimate standard for human beings. In his earlier book the author claims that the people themselves recognize this ideal in so far as those generations who feel themselves "at the height of the times,"³ full of vigor and potentiality, would not change places with any other generation, however fortunate in other respects.

One doctrine upon which Señor Ortega prides himself and which to the reviewer seemed well presented, is that of perspectivism. Accepting a radical relativism, the author maintains that reality is made up of perspectives. This is not to say that knowledge is subjective; on the contrary, as he points out, to consider a perspective as subjective because it is limited to a single point of view, is to assume a reality that *could* be seen from all points of view, or "in general"; and this is exactly what he is denying. According to his doctrine, we see reality truly when we see a single perspective because reality *consists* of just such perspectives. Ontological relativism and epistemological realism are combined. All this the author finds implied in Einstein's relativity, and rejoices to find such confirmation of his own theory.

If perspectives constitute reality, then each individual, each nation, and especially each generation, in expressing its own point of view, is adding its unique contribution to the whole scheme. And so the rationalist is wrong; there is no absolute Reason, no thinking *sub specie aeternitatis*; all thinking is localized, and must be recognized as having its particular place in the vital current that unites all living things of all times. Vital reason must be substituted for pure reason, thought and culture made instrumental to the demands of life.

In attempting to set the main lines of Señor Ortega's thinking,

² *Ibid.*, p. 71.

³ *The Revolt of the Masses*, see Ch. III.

this review has failed to give any adequate account of the many challenging ideas these books hold. Indeed it may seem to some that the value of his works lie primarily in these incidental but provocative thrusts. One may read him with disapproval, but not with complacency!

ORLIE PELL.

The Political Philosophy of Confucianism. LEONARD SHIHLIEN HSÜ.
New York: E. P. Dutton & Co. 1932. xxii + 258 pp.

European and American political theorists have been so occupied with the classic European political theories that other parts of the world, such as China, have been neglected, where there has been an equally vigorous development of political philosophy. This book is therefore useful inasmuch as it gives a detailed account of the political and social teachings advocated by the most influential philosophical school in China—the Confucian school.

Instead of building their political philosophy upon an artificial contract theory of the state, the Confucians conceive of the state as merely one phase of social life; it is an outgrowth of the patriarchal family organization. Just as family life requires the maintenance of proper relationships between father and son, husband and wife, older and younger brother, so good government requires the maintenance of proper relationships between ruler and officials and people. Therefore the most important feature of government is the development and maintenance of moral standards. The Confucians rejected any Macchiavellian separation of politics and morals. There were such Macchiavellian theorists in China, but the Confucians opposed them, and finally brought about the general acceptance of their own moral conception of the state. Political problems are therefore fundamentally moral in nature—this book accordingly gives a full account of the Confucian ethical theory in its social aspects.

As a synoptic account of the commonly accepted interpretation of the Confucian political and social philosophy, this book is very good; it is grossly deficient however in that it makes no distinction between the utterances of different generations of Confucians upon the subject. It turns a blind eye to any differences of opinion among them, as if it were possible for a vigorous philosophic school to develop for centuries without producing any varying opinions! The only disagreement mentioned is one concerning the status of women (p. 188). This book quotes indifferently from the reputed sayings of Confucius, whether in the oldest records or in later spurious accounts. In spite of a good account of the extant sources and their probable reliability, it uses as authorities all the accepted

Confucian books, whether written before Confucius or compiled and published six centuries after him (as was the *Li Chi*). It does not therefore contain a systematic account of what the ancient Confucians thought about political theory. It is a *harmonization* of their utterances in accordance with the systematic account given by the medieval Sung philosophers, quoting only those passages that confirm that interpretation and translating these passages in accordance with that interpretation. Since the Sung interpretation of Confucius has been the accepted one in China until very recently, an exposition of that harmonious account is very useful for English readers. Such a book should state clearly however that it is giving a harmonized interpretation of the Confucian teachings, instead of attempting to give the impression that it is stating the only possible interpretation.

Another serious omission is the failure to perceive the fundamentally authoritarian nature of the Confucian philosophy. Much is made in the book of the virtue, *Li*, propriety, or the code of proper conduct, but no hint is given that by *Li* the Confucians have meant merely a systematization of the customary morality.

Occasionally his typical Chinese prejudice in favor of Confucianism leads the author to praise these philosophers indiscriminately in everything they say, and to read modern meanings into ancient words. For example, he says that Confucius advocated "universal free education" (pp. 156, 193), although Confucius himself, in the passage noted, speaks merely of "indiscriminate education." The author's predisposition to find modern ideas in his sources is likewise shown when, because the Confucians believed the ruler should be guided by public opinion, he says that Confucius advocated "political democracy" (p. 191). As a matter of fact, Confucius was a loyal monarchist and approved of no other form of government than a feudal monarchy.

With a few warnings such as the foregoing, the book will be found very useful as an account of what educated Chinese today believe about Confucius, especially for its detailed exposition of the Confucian teaching and its many quotations from the original sources.

HOMER H. DUBS.

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The Fundamentals of Logic. FRANK MILLER CHAPMAN and PAUL HENLE. New York: Charles Scribner's Sons. 1933. xiii + 384 pp.

Following the publication of his *General Logic*, Professor Eaton projected a more elementary and less controversial manual. Only the outline of the first part was completed before his death. Mr.

Chapman and Mr. Henle, members of the department of philosophy at Harvard, have carried forward Professor Eaton's simplified revision in this *Fundamentals of Logic*. Any one who has used the *General Logic* in a short introductory course will be grateful for the *Fundamentals*: it preserves the main argument of its illustrious parent, and is less detailed, less complicated, and (a valuable qualification in a text for beginners) less concerned to point out the limitations and superfluities of the traditional logic.

The book is controlled by the notion of logic as the study of the structure of argument. To this end argument is defined as discourse containing inference. Part One, an exposition of the "classical" logic, gives an account of propositions, classes, immediate implication, the class and implicative syllogisms, relations and fallacies. Part Two, an exposition of symbolic logic, provides an account of deductive systems in general and of two deductive systems in particular, the calculus of classes and the calculus of propositions. Its principal aim, aside from explaining the general nature of deductive systems, is to exhibit the formulae of traditional logic as parts of wider deductive systems built around classes and propositions. Part Three, an exposition of scientific method, is an elementary account of induction, description, explanation, and probability. No more usable treatment along these lines has appeared to date. To a medieval logician this book would have appeared to be a clear-cut and obvious generalization of his beloved Aristotle. I imagine he would have found in the chapters in the calculus of classes and propositions just that kind of extension and synthesis which was so dear to his heart.

It is difficult, however, to read the first 240 pages on classes and propositions, on a 's, b 's, p 's, and q 's, without being forcibly reminded of Professor Whitehead's plea, in his *Aims of Education*, for less formulae and more "setting." I do not wish to direct a protest against this text in particular. It is an excellent example of the contemporary return to Aristotle via *Principia Mathematica*. Nevertheless, it is not easy to ignore the fact, for example, that this involves twenty-four mortal pages on the implications of a categorical proposition; forty more on the (up-to-date) arcana of the categorical syllogism, and less than a dozen on fallacies. In these matters of distribution and emphasis, I suppose, the only satisfactory solution is for each to write his own text.

Furthermore, if formalism and genuine precision are the goal, there are one or two groundless dogmas that invite inspection. An example of what I mean may be found in the pages on compound propositions. Here the unsuspecting and gullible freshman is going to read that all compound propositions are reducible to conjunc-

tives, implicatives, and disjunctives. So far as I can see, this is simply not so. And, from a new tradition which delights to distinguish between a proposition which expresses class inclusion and one which expresses class membership, between the inclusion and the epsilon relation, this seems to me something in the nature of a *tu quoque*. The relation between p and q in the proposition "If he comes, I shall go" is not the same as the relation between p and q in the proposition "If it is evenly divisible by two, it is not an odd number." To ignore this fact, to refer to these two relations by the one word "implication," or to suggest that these two propositions are built around the same propositional form, is to introduce a treacherous ambiguity that dogs the whole exposition of the syllogisms based on an implicative major premiss. The canons of the implicative syllogism, as given in the text, are merely irrelevant to arguments that involve a major premiss of the second type. These remarks apply, *mutatis mutandis*, to the other compound propositions.

Such niceties are most conspicuously absent from Part Three, on scientific method. But that is a much longer story. The hundred or so pages devoted to these matters are as good as other texts provide; and in some respects better. But they create, in one mind at least, the decided conviction that so far no one is altogether sure what ought to be said in that connection.

ALBUREY CASTELL.

UNIVERSITY OF MINNESOTA.

JOURNALS AND NEW BOOKS

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 40^e Année, No. 3. Relativité et Quanta: *L. de Broglie*. La nature des Modes selon Spinoza: *A. Rivaud*. L'Hypothèse de l'Émergence: *R. W. Sellars*. Le Moi et le Monde (suite et fin): *J. Ghéréa*. L'Inde n'a-t-elle connu qu'un mysticisme "incomplet"?: *P. Masson-Oursel*. L'Avenir de la Logique russellienne: *Thomas Greenwood*. Une Philosophie de la Conscience. Le Devoir, d'après M. René Le Senne: *E. Duprat*.

REVUE DE PHILOSOPHIE. 33^e Année, No. 3. Positions aristotéliennes concernant l'activité des sens: *Yves Simon*. La théorie du Premier Moteur chez Aristote: *Jean Paulus*. Saint-Thomas et notre connaissance de l'esprit humain: *Regis Jolivet*.

PHILOSOPHISCHE HEFTE. IV Jahrgang, Heft 1/2. Versuch einer Kulturgenealogie: *Maximilian Beck*. Über die Bedeutung der Ganzheitsbetrachtung in der heutigen Biologie: *Hans André*. Das objektive Rangordnungspinzip in der Biologie: *Armin Müller*.

SCIENTIA. Vol. LIV, aN. CCLVI-8. Die Hochmolekularen Organischen Verbindungen. Kautschuk und Cellulose: *H. Staudinger*. The Protista as the Primitive Forms of Life: *W. B. Crow*. Il concetto di "specie" nei microrganismi parassiti. Parte I.: *R. Ciferri*. La mécanique des Grecs d'après Pappus d'Alexandrie: *P. Ver Eecke*.

LES ETUDES PHILOSOPHIQUES. Septième Année, Nos. 1-2. Les tropismes animaux: *J. Cotte*. Psychologie du journalisme: *Léon Bancal*. L'idéalisme de Lachelier: *J. Segond*. Le problème de la philosophie catholique: *Maurice Blondel*.

Castelli, Enrico: Idealismo e Solipsismo e Saggi Critici. (Collezione Filosofica.) Rome: Angelo Signorelli. 1933. 108 p.

Garriguet, L.: La Vierge Marie. Sa prédestination. Sa dignité. Ses privilèges. Son rôle. Ses vertus. Ses merites. Sa gloire. Son intercession. Son culte. (Huitième édition.) Paris: Pierre Téqui. 1933. 460 pp. 15 fr.

Maritain, Jacques. Éléments de Philosophie. II. L'ordre des Concepts. I—Petite Logique. (Logique formelle.) (Huitième édition revue et corrigée.) Paris: Pierre Téqui. 1933. xi + 355 pp. 20 fr.

Hofstra, Sjoerd: Differenzierungs-erscheinungen in einigen afrikanischen Gruppen. Eine Beitrag zur Frage der primitiven Individualität. Amsterdam: Scheltema & Holkema. 1933. viii + 215 pp.

Ross, Alf: Kritik der Sogenannten praktischen Erkenntnis. Zugleich Prolegomena zu einer Kritik der Rechtswissenschaft. Kopenhagen: Levin & Munksgaard. 1933. Leipzig: Felix Meiner. 456 s.

Splendor in the Night. Recording a Glimpse of Reality by a Pilgrim. With a foreword by Rufus M. Jones. Portland, Maine: The Mosher Press. 1933. 65 pp.

NOTES AND NEWS

We have received the first number of a new periodical entitled *Revista de Psicologia i Pedagogia* published by the Institut Psicotènic de la Generalitat i el Seminari de Pedagogia de la Universitat de Catalunya, at Barcelona. Each number, to be published quarterly, will contain original articles, book reviews, sections relating to conferences, and notes concerning the Institute. Subscriptions, 15 ptes, may be sent to the *Revista* at the Institut Psicotènic de la Generalitat, Urgell, 187, Barcelona, Spain.

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXX. No. 11. May 25, 1933.

Indeterminism and the Concept of Physical Reality. V. F. LENZEN.
The Metaphysical and the Logical Individual. PAUL WEISS.
Material Truth in Rational Thinking. KURT EDWARD ROSINGER.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 12. June 8, 1933.

Perceptual and Memory Perspectives.
EVANDER BRADLEY MCGILVARY.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 13. June 22, 1933.

Concerning Platonic Esthetics. GUSTAV MUELLER.
The Problem of Knowledge. ARNOLD H. KAMMAT.
A Rejoinder. ARTHUR E. MURPHY.
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Volume XXX. No. 14. July 6, 1933.

Charles Peirce's Guesses at the Riddle. ERNEST NAGEL.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 15. July 20, 1933.

The Right and Good: Methodology in Ethics. SARAH H. BROWN.
On Using the Word "God": A Reply. HENRY NELSON WIEMAN.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 16. August 3, 1933.

Is Idealism Realism? A Reply in Terms of Objective Idealism.
CLIFFORD BARRETT.
The Definition of Idealism. EDGAR SHEFFIELD BRIGHTMAN.
Book Reviews. Journals and New Books. Notes and News.

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Quarterly. Child behavior, differential and genetic psychology. Founded 1891.
- Genetic Psychology Monographs.**—Worcester, Mass.; Clark University Press.
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Edited by Carl Murchison and an international cooperating board.
Monthly. Each number one complete research. Child behavior, differential and genetic psychology. Founded 1925.
- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
Subscription \$5.50. 540 pages annually.
Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00. 720 pages annually. Psychological literature.
Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917.
Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
Subscription \$4.00. 300-400 pages. Founded 1895. Edited by W. S. Hunter.
An annual bibliography of psychological literature.
- Archives of Psychology.**—Columbia University Post Office, New York.
Subscription \$6.00. 500 pages per volume. Founded 1906. Edited by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
Subscription \$5.00; foreign \$5.25. Acting Editor, Henry T. Moore.
Quarterly. 448 pages annually. Founded 1906. Abnormal and social.
- Psychological Clinic.**—Philadelphia; Psychological Clinic Press.
Subscription \$3.00. 288 pages. Edited by Lightner Witmer. Founded 1907.
Without fixed dates (9 numbers). Orthogenics, psychology, hygiene.
- Journal of Educational Psychology.**—Baltimore; Warwick & York.
Subscription \$4.00. 540 pages. Founded 1910.
Monthly (9 numbers). Edited by Harold O. Rugg and cooperating board.
- Comparative Psychology Monographs.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter.
Published without fixed dates, each number a single research. Founded 1922.
- Psychoanalytic Review.**—Washington, D. C.; 3617 Tenth Street, N. W.
Subscription \$6.00. 500 pages annually. Psychoanalysis.
Quarterly. Founded 1913. Edited by W. A. White and S. E. Jelliffe.
- Journal of Experimental Psychology.**—Princeton, N. J.
Psychological Review Company. 900 pages annually. Experimental.
Subscription \$7.00. Founded 1916. Bi-monthly. Edited by Samuel W. Fernberger.
- Journal of Comparative Psychology.**—Baltimore; Williams & Wilkins Co.
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Bi-monthly. Edited by Knight Dunlap and Robert M. Yerkes.
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- Journal of General Psychology.**—Worcester, Mass.; Clark University Press.
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Edited by Carl Murchison and an international cooperating board.
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Quarterly. Political, racial, and differential psychology. Founded 1929.
- Character and Personality.**—Durham, N. C.; Duke University Press.
Subscription \$2.00. Edited by Robert Sandek and Ernest Seeman.
Quarterly. Psychodiagnostics and allied studies. Founded 1932.

Book

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WHAT IS POETIC TRUTH?

IF THE frequency with which a concept is named were indicative of its clarity and explicitness, the notion of truth as employed in literary criticism would be one of the clearest. One can not find many essays in literary criticism in which the author has refrained from making a passing allusion to the "truth" of the work under consideration. It has frequently been said, with Emerson, that "veracity is that which we require in poets," or with Coleridge, that "poetry relies for its power upon truthfulness." Yet, like all common-sense or semi-philosophical writers, the critics have never really paused to examine precisely what they intended to convey by such a characterization. The tacit assumption that the meaning of truth is a matter of common knowledge led Matthew Arnold to write with an air of familiarity that "poetry is nothing else than the most perfect speech of man, that in which he comes nearest being able to utter the truth." For the purposes of ordinary communication there can be little objection to the uncritical use of language as we find it in the literary critics, since the core of the meaning of popular speech is the unambiguous denotation of objects and events without reference to their analytical whatness. But such a claim of philosophic ultimacy for the poet as is put forward by the critics I have quoted, and innumerable critics unquoted, can not go unchallenged by the philosophic critic of literature. In this paper I shall try to show that these practical critics claim too much for poetry, but that a residuum of philosophic insight is present in this attribution of truth to poetry.

The fatal defect of most theories of poetic truth is the failure to make explicit, on the one hand, the general theory of truth under which the specific theory of *poetic* truth is subsumed, and on the other, the conception of the poetic proposition. For a theory of poetic truth is ultimately unclear if these two questions have not first been answered: first, what is truth in general? and second, what precisely is that which is true when it is said that "poetry" is true? Not only is it necessary to attempt an answer to these questions; it is also necessary to adhere tenaciously to the conceptions expressed. One might suppose it superfluous to mention such an obvious point

of philosophic method, but in a discussion connected with poetry one is only too prone to wander off into encomiums on the mysterious, prophetic quality of poetry and at the same time to lose all connection with any express theory of truth. If this paper in the least measure fulfills its purpose, it will exhibit one discussion of the problem in which an attempt is made throughout strictly to adhere to explicit conceptions of truth and of the poetic proposition.

The most that can be done here is briefly to summarize by means of a few definitions the generic theory of truth which underlies the present discussion. Truth is the relation of exemplification between a fused essence and the realization of that essence in existence. A proposition is a type of essence, which we shall call "fused" because it is complex, such that that essence contains as a part of its content two or more essences joined by some relation. A proposition is true if this essential content is actually exemplified in existence. It follows that a proposition need not be entertained if it is to *be* true, for a true proposition is simply a member of that class of essences which are exemplified as the essence specifies. Truth must therefore be distinguished from true knowledge, for the latter is truth which is the object of some person's knowing processes. A judgment is a proposition together with the psychological attitude of entertaining, doubting, affirming, or denying assumed toward that proposition by some person. Thus we may say that a *proposition* is true or false, while the logical value of a *judgment* has reference to the correctness or incorrectness of the attitude of affirmation or denial which is assumed toward the proposition, depending upon whether the proposition is in fact true or false as judged. A judgment in which a proposition is merely entertained can be neither correct nor incorrect, since this activity of entertaining a proposition, that is, of contemplating its meaning, is neutral with respect to truth or falsity. It is correct to doubt a proposition when the person so judging has not sufficient evidence to render a conclusive judgment; while it is incorrect to doubt when the evidence is such as to compel affirmation or denial.

Many of my readers will probably shake their heads over the crucial relation of this theory, that of exemplification. Define it, they will say. The definition of this term has never been achieved in philosophy because, I suspect, the term is indefinable. The word "exemplification" is the name of a relation which can be located in experience, and the philosopher can use this word so as to suggest where to look for the relation that it stands for. And if, after it has been indicated to him, the doubter still refuses to acknowledge this relation, one can reply that he is averting his eyes from an experience on the prompting of some contrary theory. The relation

has determinate significance for him who recognizes the inevitable distinction between essence and existence. Essence is the pure possibility of which the existent is the realization. Propositions, since they are essences, are possibilities which do or do not have their actual counterparts in the world of existence. In those cases where exemplifications exist, the proposition is true, and where they do not, the proposition is false.

This statement of a theory of truth is elliptical enough, but I hope that this suggestion will at least serve to bestow upon the theory of poetic truth a minimum of intelligibility.

If poetry can be said to be true, we must ascertain what the terms of the truth relation are. We pass on to the conceptions of the poetic proposition and the existent which this proposition exemplifies. It is evident that the meaning of any given poem is far from unambiguous. Aside from the pitfalls of erroneous interpretation which are fallen into more often than not, it is possible to derive two separate types of proposition from poetry. Let us name these the literalistic and the poetic propositions. The literalistic proposition in poetry can be illustrated from the following lines of Marlowe:

"the restless course
That Time doth run with calm and silent foot,
Shortening my days and thread of vital life."

To understand this proposition literalistically is to judge it as one would judge a scientific or philosophic proposition, that is, by the explicit denotation of objects and essences. No importation into the language of anything not explicitly stated is permitted to the literalistic proposition. Thus the differentia of the literalistic is this: its meaning is exhausted by the denotation of objects or essences directly indicated. In the above passage from Marlowe the literalistic interpretation forbids the personification of "Time" which was the obvious intention of the poet and is central to the meaning he intended to convey. Literalistically interpreted these lines mean that a metaphysical concept "Time," must engage in that form of motion known as "running"—an extraordinary feat for a concept. Further, as if Marlowe had wished to revenge himself upon the metaphysician, the literalist would accuse Marlowe of saying that the concept "Time" was "shortening my days." It may be true that preoccupation with metaphysical concepts has shortened the lives of philosophers, and Marlowe may have thought so, but I am confident that he did not intend to bait the philosopher in this passage.

The literalistic proposition in the lines of Marlowe is absurd. Yet this is how we should have to regard these lines from the propositional point of view if the literalistic or scientific proposition (these

two are equivalent) was the only type. This mode of interpretation is essentially an "unimaginative" one. I am not using "unimaginative" in the pejorative sense here; for the meaning of scientific propositions, in accordance with their function in communication, is restricted to the stark denotation of the verbal symbols, and nothing should intervene in the symbolic configuration between the symbol and its denotation. Imagination is here simply out of place. Poetry taken thus in terms of literalistic propositions can not often be said to be true, as this proposition of Marlowe is not true. If I seem to have belabored an obvious point I must be excused on the ground that most treatments of the subject do not adequately distinguish the poem as literalistic proposition from the poem as poetic proposition.

What, then, is that which can be included within the conception of a proposition and at the same time can be adequate to the meaning intended by the poets? That depends on what one conceives to be the nature of poetry. All poetry, it seems to me, is essentially of the character of metaphor. In the narrow sense this world has been well defined by an old rhetorician: "A metaphor is an alteration of the word from the proper and natural meaning to that which is not proper, and yet agreeth thereunto, by some likeness that appeareth in it." Like metaphor in this narrow sense, poetry as metaphorical is the turn from literalism toward a meaning only suggested by the language, but located beyond the direct denotation of that language. In contrast to the direct passage from verbal symbol to meaning which constitutes the literalistic interpretation of language, the meaning of poetry is achieved by indirection. In poetry there is a non-verbal context which is designed to arouse the reader from the lethargy of verbal habits and from the consequent abeyance of a vivid imagining of what the words mean. Thus there is interposed between the word and its meaning that sensuous connotation which is of the very essence of poetry. The bare language is filtered through the sensuous connotations induced by the context.

This context I have called non-verbal because the effect of poetry is not gained exclusively from the meaning of words, but from the insinuations of rhythm, metre, and euphony. I take metaphor in the narrow sense as the type of device to effect a departure from the literal. In the broad sense poetry as metaphorical means that the final language of poetry is unexpressed, but only insinuated by the words of the poet. The entire organism is brought into play, guided by the implicit directions contained in the verbal formulation of the poem. The apprehension of poetry demands the release of sensuous as well as cognitive activity brought about by the concentration of thoughts and feelings compressed into rhythmic sentences of eu-

phoniuss, metrical, and figurative construction. The function of all this poetical apparatus is made clear when likened to that of metaphor in the narrow sense. What Aristotle said of metaphor in the narrow sense is even more true of metaphor in the wider sense. For the poet, he said, "the greatest thing by far is to have a command of metaphor. This alone can not be imparted by another; it is the mark of genius." Literalism, or exact denotative statement, is the gift of the scientific writer. The poet, contrarily, is ever straining to overreach the limitations of literalism and it is his peculiar genius to induce a sensuous as well as a cognitive activity initiated by an appropriate juxtaposition of words.

The poetic proposition, if it is to be anything at all relevant to the poet's intended meaning, must then be different from the literalistic proposition. The elements of poetry are not only intellectual and cognitive, but sensuous and emotional as well. The actual words used serve only as the detonator of affective as well as cognitive activity. "Affective" is not here used in the sense of pleasant or unpleasant responsiveness, but is rather the term signifying evaluative, non-cognitive activity. Because affectivity must always be a response to some stimulus, cognition of the stimulus must precede the affectivity. Consequently, cognition of objects conjured up by the imagination as stimulated by the poem is as much a part of the poem as the affective response to these imagined objects. The psychological response in its entirety is what the poet meant to call forth. Granting that the nature of poetry is something of this sort, the problem arises in what sense, if any, poetry can be said to contain poetic *propositions*. Nearly all theorists are of the opinion that the sort of thing that I have suggested poetry to be is not at all amenable to propositional treatment. A recent writer on the subject, Mr. L. A. Reid, in dealing with the question of truth in art, maintains that art is essentially non-propositional. In the case of art, he says, "there is revealed æsthetically a meaning in a body. But the point of course is that in art the meaning just is embodied in the embodiment [i.e., in the art object]. As regards propositions there is no such embodiment. We have, then, in art the reality in which we are interested, whereas in propositions the reality is only symbolised by the body [i.e., by the words in which the proposition is expressed]." ¹ It is true that if poetry is properly read or heard, the response is itself the terminus of the experience and contains more than the denotational activity towards which the scientific proposition is instrumental. The language and suggestion of poetry are valued in themselves and are "embodied," to use Reid's term, in the sense that some concrete situation is being re-lived by him who

¹ L. A. Reid: *A Study in Æsthetics*, p. 265.

apprehends the poetry, whereas the scientific proposition is only an indicator of essences and existent objects in relation. Some poets have protested against regarding a poem in its instrumental function as is the case with the verbal expression of a scientific proposition. In his *Ars Poetica* MacLeish has said,

"A poem should not mean
But be."

A resolution of this difficulty as to the non-propositional character of poetry lies in the discovery that what Reid is here referring to as the embodied poem is *not the poetic propositional at all*. Such a confusion as to the propositional aspect of poetry is explained in large measure by the fact that the word "poetry" is used to stand for several distinct, though related, entities. We may think of the "poem" as the physical paper-and-ink object which is the bearer of the words. Or we may consider the organic response to these ink-markings as the "poem"; it is to this latter entity, I believe, which Reid is here referring to as the "embodied meaning." Or we may regard the "poem" as that which I have called the poetic proposition. In brief, the poetic proposition is the essence of the second entity just designated as the poem: it is the essence of that event which is the complete and relevant response of some organism to the pregnant word structure which the poet has made to guide others to the experience he intended to communicate. The poetic proposition is thus distinct from the actual poetic response, and the former stands in the relation to the latter as possibility to actuality.

To conceive of the essence as of the nature of possibility seems to me the most intelligent manner of approaching the thorny problem of the nature of essence. To have its being logically and metaphysically prior to its actuality is a consequence of the notion of possibility. It would be misleading to say that essence is temporally prior to its exemplified actuality, since essence is properly timeless and hence not subject to temporal characterization. The poetic proposition can thus be seen to be the entire complex of the poetical response *in potentiality*. To each feature of the response as actual there attaches an essence, and the response as a whole has a complex essential counterpart in which the essence of each individual feature has its proper relative place.

If it is true that the poetic proposition is the essence of the actual poetic response, then we are able to deal with another objection which Reid raises against any propositional treatment of poetry. He says, and rightly, it seems to me, that art is not assertive, in the logical sense. "I am not of course suggesting," he writes, "that the reality which is the work of art can be produced apart from all judgment or even apart from all proposition making. I am only

saying that a work of art is not, as such, logically assertive, as propositions are assertive."² Assertion is here taken as a psychological act, but according to the conception of the proposition suggested earlier in this paper, no psychological attitude at all need be assumed towards propositions to determine their truth or falsity, which is independent of any determination by mind. Poetry does not then need to be judged to be true to *be* true; so that, even if no correct judgment about true poetry had ever been made, poetry might still be true in the sense that there subsisted poetic propositions which were exemplified as I shall soon indicate. I agree with Reid that poetry is not logically assertive, but I disagree that assertion is necessary for truth. Assertion is required only where there shall be true knowledge, while truth itself is independent of all knowledge.

Thus we see that we need make no apology for calling the poetic proposition a proposition. The usage is here as strict as it is in science. The only difference between the two in respect of strictness is on the side of knowledge. It is more difficult to get at, and determinately to apprehend, a poetic proposition than a scientific. This is a practical difficulty, but it does not prejudice the propositional character of the poem in its aspect as a fused essence containing essences in relation.

There is, however, one important distinction as between the content of the literalistic and the poetic proposition. Never can the poetic proposition be merely the essence of non-human objects devoid of any suffusion with human feelings, while the literalistic proposition is often precisely such an essence detached from human significance. For poetry is sensuous and passionate always, demanding, as Coleridge said, "that neither thought nor imagery shall be simply objective, but that the *passio vera* of humanity shall be warm and animate both." The contemplation of sunrise, for instance, has been poetically expressed upon innumerable occasions. Although all these descriptions have in common the physical fact of sunrise, in their fullness they bear more than this. If successful, they stimulate an affective attitude toward the imagined sunrise and never merely the impersonal cognition of it. Poetry is saturated with pathetic fallacy, the attribution of human feeling to non-human objects. A clear illustration of this occurs in the passage from *Doctor Faustus* quoted earlier:

"the restless course

That Time doth run with calm and silent foot,
Shortening my days and thread of vital life."

What is here being contemplated is not the mere fact of the inex-

² *Ibid.*, p. 266.

orable passage of time, but the aspect that this passage of time takes on as it affects human life. Again we can discern the pathetic character of poetry in these lines from Keats' *Ode to Autumn*:

"Season of mists and mellow fruitfulness,
Close-bosomed friend of the maturing sun;
Conspiring with him how to load and bless
With fruit the vines that round the thatch-eaves run."

The poet has invested the sun and autumn with human qualities because he can by this means vividly represent a set of natural phenomena as they might look to an imaginative person. Thus we may say finally that the poetic proposition differs from the literalistic not only in the manner of its expression, but also in the fact that the poetic proposition invariably includes the essence of some psychological event stimulated by language, and is never solely the essence of some non-human object. With the realization that the affective attitude is invariably present in poetry, one can understand the statement of Mr. I. A. Richards that that poetry is a "store-house of recorded values." Poetry is now seen as a tissue of valuing occasions during which the significance of real or imagined objects to human welfare is the dominant factor; and poetry is never the cognition of ideas or objects stripped of their importance for human interests.

I have tried briefly to suggest what it means to say that the poetic proposition is definable as the essence of the response to the structure of words bequeathed by the poet. Of course this response must be strictly relevant to the intended meaning and not based on an arbitrary interpretation of the verbal poem. But how can this poetic proposition be said to be true? Generic truth was defined earlier as the relationship of exemplification of some essence to its existent. What is the existent which can exemplify the poetic proposition? This existent is some affective experience met with in the course of non-poetical activity. I say "non-poetical" because I do not mean to urge the trivial conclusion that the truth of a poetic proposition is the exemplification of this proposition on the different occasions when this same poem is contemplated. It would be an important conclusion, I think, to show that the poetic proposition is or was exemplified in an unpremeditated experience met with in the regular course of human experience. And it seems to me that this is the case with a large body of poetry, though not with all poetry.

We can press this conclusion by appealing to a common fact of literary history, that each age produces a few great poems which seem to express concisely and completely the mentality of that age in terms of the quality of its valuations. For each age has its emotional and valuational bias, and great poets seem to condense this

bias into poetic form out of the emotional and general affective atmosphere of the time, so that each person who reads the poem adequately experiences a renewal of this attitude. Thus is the mentality of an age objectified and brought to self-consciousness. Why is *The Waste Land* widely bruited nowadays and regarded as one of the major poetic achievements of our time? Because it seems trenchantly and comprehensively to express the feelings of a significant group of our contemporaries. *The Waste Land* did not create the mood of disillusionment, though the poem may have deepened it or prepared the exodus from the waste land, but at least it brought this mood to self-consciousness. Likewise the central poems of the early romanticism in England—the *Elegy* of Gray, Burns' *Cotter's Saturday Night*, Goldsmith's *Deserted Village*—did for their time what *The Waste Land* has done for ours. They provided the means whereby an already existing state of mind could become explicit and conscious to contemporaries, and could be renewed by succeeding generations. And so, through the entire history of poetry, one could show that poems possessed the potentiality for inducing an affective attitude which the sensitive poetical minds had caught up from the temper of the times and had thereby permanently fixed. In the sense that there is or was an actual psychological attitude which is or was the exemplification of the poetic proposition, such poetry as I have been speaking about can be said in a strict sense to be true.

Not only poetry which expresses phases of a *Zeitgeist* can be true. Some poetry is more nearly universal in the sense it can induce an affective attitude which exists in nearly all places at nearly all times. Much love poetry is true of the entire modern era, like the sonnets of Shakespeare. There is probably little, if any, completely universal poetry, for the mode which the expression of primal human dispositions assumes probably varies a great deal, if one considers the full range of the civilized era. The lines of Marlowe I have quoted represent an experience about as nearly universal as any can be, for most persons undergo at some time or other this sense of the inexorable passage of time and the running out of their lives.

An analysis of the major types of poetry and the specific ways in which truth can be attributed to them would clarify the conception of poetic truth, but I can not go into this elaboration of the question here. It should be especially noted that this paper does not assert that *all* poetry must be true to be good poetry. Nor has anything at all been established as to the relation of truth to value in poetry. To trace these connections between truth and value in poetry is perhaps the most profitable use which can be made of a theory of poetic truth. While recognizing this, I have limited my-

self here solely to the exposition of a theory of poetic truth, and any criticism of this theory which introduces considerations of value is not in point. But I should like, in conclusion, to show how this theory of poetic truth provides a basis for exposing what seems to me the fallacies of a view of poetic truth widely held to-day, and one which has its most influential exponent in Mr. I. A. Richards.

Mr. Richards maintains that truth is irrelevant to poetry because the function of poetry is regarded by him as the evocation of emotion, and emotion is not true or false, but simply is as experienced. "The statements which appear in poetry," writes Mr. Richards, "are there for the sake of their effects upon feelings and not for their own sakes. Hence to challenge their truth or to question whether they deserve serious attention as *statements claiming truth*, is to mistake their function. The point is that many, if not most, of the statements in poetry are there *as a means* to the manipulation of feelings and attitudes, not as contributions to any body of doctrine of any type whatever."³ Thus poetry and truth can not be related in the same universe of discourse. To say that "Poetry is true" is the same kind of incoherent statement as if one should say "Virtue is triangular." The reason for this opinion of Mr. Richards is not far to seek and is undoubtedly justified, if one admits that there is only one type of proposition, the literalistic. The fact that all objects dealt with in poetry are obviously falsified by the feelings projected into them makes it trivial to inquire as to the truth of the direct references of poetic statements, since everyone knows that they are nearly all false if interpreted literalistically.

Thus Mr. Richards has distinguished "scientific utterances" from "emotive utterances" which correspond, in our terminology, to the literalistic and poetic modes of expression. The word "emotive" as applied to the latter, it might be observed, seems to have unduly restricted connotations, for it implies the limitation of the content of the psychological event, which is the response to the verbal poem, to emotion when there are also sensuous and cognitive elements. For Mr. Richards, truth is applicable only to scientific utterances, while emotive utterances can have no truth status whatever. "Corresponding in some degree," writes Mr. Richards and his collaborator, Mr. C. K. Ogden, "to the strict sense of true and false for symbolic statements (True^S), there are senses which apply to emotive utterances (True^E). Critics often use True^E of works of art, where alternative symbols would be 'convincing' in some cases, 'sincere' in others, 'beautiful' in others, and so on. And this is commonly done without any awareness that True^E and True^S are different symbols."⁴ Anyone who has observantly read literary

³ *Practical Criticism*, p. 187.

⁴ *The Meaning of Meaning*, p. 260.

criticism will attest to the justice of this statement, for "truth" has certainly been used as ambiguously as these writers indicate. But the denial that truth can be attributed to emotive utterances at all is significant, it seems to me, of an incomplete analysis of the problem. What is lacking in Mr. Richards' analysis is the failure to discern what the poetic proposition is. Poetry, for Mr. Richards, is an "emotive" response which is neither believed nor disbelieved, but is simply enjoyed for what it is; consequently he regards truth as completely irrelevant to this situation. Admittedly, as was pointed out above in the discussion of Reid's contention that poetry is non-propositional, an emotive response can not as such be true, for it simply is. But neither in the case of the scientific proposition is the psychological *response* to the verbal formulation true or false: that which is true or false is the scientific *proposition*. Poetry deserves similar treatment. What can be true in poetry is the poetic *proposition* and not the psychological response. Furthermore, whether poetry is actually believed or disbelieved, or whether the hearer of the poetry is indifferent with respect to belief or disbelief, the poetic proposition is as a matter of fact exemplified or not, and is accordingly true or false.

Not only is Mr. Richards' analysis incomplete; he also makes a number of statements in the course of his writings which seem to contradict his explicit view that truth is irrelevant to poetry. It is not necessarily the theory of truth advanced in this paper that is implied by these statements, for they can be shown to be compatible with different theories of truth. The statements which I shall quote all contain what I consider the essential feature of any theory of poetic truth, namely, *a reflexive reference of the poetry to actual affective experience*. Mr. Richards says in his *Principles of Literary Criticism*: "The world of poetry has in no sense any different reality from the rest of the world and it has no special laws and no other-worldly peculiarities. It is made up of experiences of exactly the same kinds of those which come to use in other ways" (page 78). I can not vouch for the philosophical rigor of Mr. Richards' statement, but that poetry might renew experiences undergone in non-poetical life, and hence be true, might follow from Mr. Richards' statement. Again in the same vein he says in his *Practical Criticism*: "For there is no such gulf between poetry and life as over-literary persons sometimes suppose. There is no gap between our everyday emotional life and the material of poetry. The verbal expression of this life, at its finest, is forced to use the technique of poetry; that is the only essential difference" (page 319). If poetry is an expression of life not different in kind from that life, then it might be the case that the expression could be compared to that

life, and found to be a faithful expression. The poetry would thus be "true." Two more short passages from the same book seem to support my contention that Mr. Richards has an implicit theory of poetic truth. In commenting upon the use of the word "tingling" in one of the poems discussed there, he says that "the vividness of the poet's memory is remarkable" (page 107, note 1). Again Mr. Richards is resorting to that reflexive reference from poetry to life whose outcome is a judgment that the poetry in question is true or false. One more passage: "For a comparison of the feelings active in a poem with some personal feeling still present in the reader's lively recollection does give a standard, a test for reality" (page 239). Substitute the word "truth" for Mr. Richards' "reality" and, without any violation of the sense of this passage, a beginning has been made on a theory of poetic truth.

To summarize: I have tried to set forth three notions bearing upon poetic truth. First, generic truth has been defined as the relation of exemplification between an essence and its existent realization. Second, the poetic proposition was defined as the essence of the psychological response to verbal structures known as "poems," and although the poetic proposition is as strictly a proposition as the literalistic or scientific is, the modes of knowing these two types of proposition differ. And third, poetic truth was asserted to be the relation of this poetic proposition to its exemplification in an actual experience. This paper may have raised more questions than it treated, but if the problems involved in a theory of poetic truth have been exposed or suggested, this paper will not have been in vain.

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DATA, DATIVES, AND ABLATIVES

WE have heard a great deal of late about "data," and it has been generally, freely, but perhaps rashly, assumed that they are somehow important, or even essential to the understanding of knowledge. Without on this occasion directly questioning this assumption, although it is one which may well provoke some scepticism, I am willing to take it on faith that "data" have somehow to do with knowledge. Even granting this, however, I have been somewhat painfully impressed by a confusion that appears to prevail in some quarters, with reference to the starting-point, alike of actual knowing and of what is called "the analysis of knowledge," and also by the ambiguity and insufficiency of the vocabulary in terms of which philosophers attempt to cope with this situation. This confusion is, I believe, largely due to an underestimate of the

complexity of the knowledge situation, and could be greatly lessened by enlarging our vocabulary and recognizing more distinctions: hence this paper is offered as a slight contribution to this end.

I

As regards the starting point in any account of knowledge it would appear to be evident that we have a considerable choice. Thus we can (a) modestly start from a problem of actual knowing and set ourselves to consider how we can make our way from it to further knowledge, endeavoring humbly to observe how our knowledge actually grows. This procedure will be psychological in the broadest sense, although our academic psychologies may shrink from undertaking it. Or (b) we can assume a haughty and complacent attitude of *ex post facto* reflection on an accomplished achievement of the knowledge that is a product of the knowing process, and can proudly review it in the light of its success, real or supposed. For historical reasons this procedure is known as epistemological. It is fairly clear that these two enterprises are quite different and easily distinguishable. Yet they would appear to be frequently confused. I wish to declare war upon this confusion.

The second of these undertakings which seems to be the aim that has animated nearly all epistemologies, has a decidedly ambitious program. It essentially involves not a description, but an avowed or covert *evaluation* of knowledge. The first, on the other hand, though it should not hesitate to *record* cognitive values, need not as such involve anything more than a psychological description of a factual process.

It should next be noticed that, if to epistemologize we are determined, we have a choice between a great variety of epistemologies. Any piece of knowledge can be reflectively described and valued in terms of any rationalist, empiricist, realist, idealist, Kantian, pre-Kantian, and post-Kantian theory of knowledge. And any theory of knowledge can be complicated and confused by any sort and amount of metaphysics. We shall have to admit, therefore, that in principle there may be an infinity of such epistemological stand-points, and of "epistemologies" proceeding from them. What will be common to them all will be that they will all *presuppose* knowledge, and will all be *ex post facto*. So they will all be *post-analytic*, in Professor Loewenberg's useful phrase: i.e., rearrangements, manipulations, or shufflings of logical abstractions. Hence there will be no need for any of them to concern themselves with any actual process of generating knowledge; they should not even *claim* to accomplish the description of such a process. Unhappily they *do* often claim to be descriptions, and even the sole admissible descrip-

tions, of knowledge, from an indeterminate and ambiguous standpoint which is either psychological or logical, or both, or neither, like the famous *Critique* of Kant; but strictly they have nothing to do with any psychological fact or order of events. Accordingly when they make such a claim, they invariably fail to substantiate it; and it would avoid much confusion if they all ceased to make it. We should then be left free to *choose* our epistemologies, and could base our choice candidly and honestly on their *esthetic* merits; we could revel in the complexities of the Kantian system and the beauties of the Hegelian dialectic, with a good conscience. If ever we tired of the airy fancies of esthetics and desired to renew our contact with Mother Earth, we could proceed undistracted to our descriptions of the process of knowing, with our eyes keenly open to the observation of what would be in some sense facts.

II

Even so, however, we should not escape from choice between alternatives merely by adopting the first aim, and by setting ourselves to trace the development of actual knowing. We should have escaped indeed from an infinity of distorting "reflections" and fantastic interpretations of the actual process; but we should still have to decide, before proceeding further, what psychological process we meant to observe, and from what standpoint we intended to view it. At this point therefore we shall have to consider at least three very distinct alternatives.

(1) We can start, very easily and naturally, from the individual mind of the philosophic observer. This is usually a more or less sane adult mind, which has come to be what it is in consequence of an historical process. The philosopher's natural endowment, education, social circumstances, in short his whole idiosyncrasy and history, will have left their mark in and upon his observing mind, and will be part of the instrument whereby he hopes to describe the generation of knowledge. Of all the various sorts and senses of "*data*" those which arise in the context of an individual soul have the best claim to be primary, and to be truly "given"; but even they can hardly be said to be absolutely given, and collectively they certainly form not a cosmos to be accepted, but a chaos to be transcended.

(2) We can start from the standpoint of common sense, and take for granted the truth, or at least the descriptive value, of the assumptions of common-sense realism. Of this standpoint philosophers are apt to be unduly contemptuous. They regard it as far beneath them, and as almost beneath their notice. Yet they should bear in mind that it comes of an ancient stock and has a long history behind it. The common-sense view of the world is the outcome of a long de-

velopment, and the embodiment of much racial experience: the view which man and his ancestors have successfully evolved for dealing with the world in which they have lived and have managed to survive. It has therefore the highest pragmatic sanction, and should not be lightly set aside. Yet it must also be admitted that its sanction is *only* pragmatic, and that its solutions are primarily practical. It must not therefore be assumed that they can be pressed beyond the point at which they cease to be useful; they were not intended to be complete theoretic accounts of all things, nor are they commonly fit to be such.

It should be noted further that *data* on this common-sense level are always *social facts*, but need not be anything more. They may be conventions, fictions, or superstitions, which are not binding on the individual knower, and may actually be rejected by him. There are always some, and often many, who do not believe what is commonly believed, and do not do what is commonly done. Hence the appeal to common-sense *data* usually involves a certain risk.

Finally, all (and especially those of us who are philosophers) should always be on their guard against relapses into common sense, after having ostensibly abandoned it for something supposed to be higher. For in that direction inextricable confusion lies. Yet few philosophers, I fear, can be wholly acquitted of such relapses. For philosophers are human, and human atavism is so very strong.

(3) We can place ourselves at the standpoint of science, and set ourselves to observe how scientific truth progresses. This choice will entail further alternatives. For the standpoint of science will really split up into the several standpoints of a number of particular sciences at a particular time: science is made up of sciences, each of which has its problems, and has had its history. So we shall really have a great plurality of standpoints under this heading, from which to view the growth of knowledge. None of these standpoints, however, can safely be taken to coincide either with that of the individual knower or with that of common sense. The scientific *data*, from and about which the sciences argue, are never the more or less crude *data* which are treated as *given* either by common sense or by the individual knower. They are always *sumpta*, and selected from what appear to be *data* on some lower, non-scientific level, from motives which are really dictated by the interests of each science; moreover they are usually seen in the glamorous light of whatever scientific interpretation happens to be in fashion. Thus, the scientific *data* are literally *creations* of the sciences, products of highly selective value-judgments, made in the interests, and for the purposes, of each science that adopts them. Nothing could well be more remote from the elusive ideal of unsophisticated fact.

It is easy therefore to understand what terrible confusions may arise if all the *data* that can be alleged on all these different levels, and in all these contexts, are lumped and jumbled together in one amorphous, undiscriminated mass; and I fail to see how any intelligible or serviceable theory of knowledge can emerge from such confusion.

Even if we agree to limit our *data* to the scientific level, our procedure will commit us to severe restrictions, which will disqualify our sciences from representing the ultimate truth about the whole of reality. For not the whole of human history will be relevant to the scientific standpoint, but only that part of it which led up to it; nor will the whole of human idiosyncrasy be relevant. For the purposes of scientific description only the attitude of the scientist, *qua* scientist, may be assumed. Hence our descriptions will probably be conceived in much narrower and more abstract terms than in the two former cases.

Yet in these less sophisticated cases also, we shall have had to use plenty of abstractions. For the common-sense standpoint has already involved an enormous purging of our primary experience. It has ruled out great masses of it which have gone into discard under the headings of unreality, imagination, dream, illusion, hallucination, error; it has placed highly laudatory valuations upon the preferred remainder which it deems pragmatically serviceable. Moreover, the individual knower also is a highly selective agency: his interests are selective and he is by no means free from prejudices. His reactions and interpretations are determined by his past, and related to his future: they embody his aims, hopes, and fears, and utterly fail to conform to the ideal of pure, unbiassed, and disinterested knowing.

Hence, if it is *de rigueur* to cling to the traditional ideals of pure science, pure apriority, absolute truth and absolute fact, we shall have to go far afield to seek them, and are likely to find ourselves embarked upon a wild-goose chase.

The most promising hunting-ground, perhaps, to which we shall be directed, will be the knower's earliest infancy. So we shall be bidden to resuscitate the psychological baby, and to listen reverently and with bated breath to the unsophisticated howls with which it greets the first impact of the real. Yet we shall speedily be driven to admit that in the psychological baby's first experience only the first howl can possibly be pure. The second will already be affected and vitiated by the memory of the first, and by the time its artless babblings fulfill the promise of intersubjective intercourse, it will have committed itself to all the sophistries of human speech, and the whole metaphysic enshrined in language.

Thus it is clear that, even at their best, the various creeds, even of epistemology, have tried to build their churches upon a very narrow pinnacle of solid rock. Perhaps the true moral is that, for practical purposes of describing our knowing processes, we shall do better to give up the hunt for absolute *data*; perhaps we should conceive our *data* differently, and resign ourselves to the use of *data* which confess that they are relative—to the standpoints which serve us as starting-points, to the aims we have in view, to the knowledge which is available, to the methods in use, to the experiments which have been, or can be, tried.

III

After hewing our way through this jungle, how shall we conceive our *data*? If we are wise and prudent we shall, I think, before attempting to go further, enlist a whole host of distinctions.

Let us distinguish, therefore, *data*, things given, from *sumpta*, things taken. Let us observe moreover that there has been a great deal of taking for granted and selecting, before accepted *data* could reach their present shape. We may wonder whether there are such things as pure *data* anywhere to be encountered or obtained, by hook or by crook. It is always permissible to inquire what assumption of *data* (if any) serves any useful purpose in any particular inquiry.

We shall have to accommodate also a variety of *inventa*, things stumbled or hit upon and found, though we may feel doubtful whether the mere fact that they are somehow there, yields us any guarantee that they can be put to important uses.

And, above all, we shall insist on making explicit the hidden relations lurking in these notions. A *datum*, we shall say, is essentially triadic: it can not be a *datum* unless it is given *by* someone, or something, *to* someone—and withal, given *for* some purpose or inquiry. These three relations should all be borne in mind, stated and made clear, before any *datum* can fully be discussed. Similarly, it is surely clear that a *sumptum* is taken *by* someone, *from* something, *for* some purpose. Even an *inventum*, though it may seem to pop in upon us out of the blue, must surely have a context which is observable; even if it is merely encountered *by* someone, it must be met with *somewhere* and *at* some time. All these particulars, which are observable in every process of actual knowing, should be dragged out into the light of day, and not slurred over and suppressed, as has been the custom. For they may always prove relevant to the purpose and value of an argument, and are always relevant to its *meaning*. Without understanding of them, its meaning may at any moment dissolve into vagueness and ambiguity. Verily there is much work to be done upon *data* before they can be used!

IV

Lastly, may I justify my title? The term "*data*" has proved extremely vague, misleading and hard to justify; but in whatever sense we have found it convenient to take it, we can properly call *datives* what we think we have gained from the *data* we have assumed. Then our "*datives*" will properly be gifts or donatives, and we shall not forget our debt of gratitude to their donors. The term "*ablative*," on the other hand, will properly express the products of any process of ablation, abstraction, or selection. And seeing that all, or nearly all, the entities called *datives* will, in point of fact, involve references to starting-points, and purposes, and methods, which can not be represented as merely given or acquired without the co-operation of the mind's activity, and will actually have been arrived at by varying amounts and degrees of abstraction and selection, shall we not have to declare that our "*datives*" are in truth to be accounted "*ablatives*"?

V

This conclusion appears to me to be irresistible. It completes the work which the greatest of grammarians and school-book-writers, or as James would say of American school-room pests,¹ Julius Caesar, initiated several thousand years ago when he recognized the Latin ablative, and segregated it from the dative, in which it had been merged. Even if, however, philosophers should not be willing to accept these results in full, and the elucidations of current terminology which they demand, I shall not be utterly discouraged. For perhaps I shall be thought to have said enough to put believers in "*data*" upon the defensive, and upon their mettle. I may even cherish a hope of eliciting from them straightforward declarations as to what precisely they do mean by "*data*," what kinds of them they require for their metaphysics and theories of knowledge, whence they propose to acquire them, and how they propose to justify them. After that I, for one, and perhaps also some others, may feel less at a loss in sailing the frail bark of human reason on the high seas and in the deep waters of epistemology!

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¹ *Pragmatism*, p. 254.

BOOK REVIEWS

The Philosophy of Physical Realism. ROY WOOD SELLARS. New York: The Macmillan Company. 1932. Pp. xiv + 487.

There seems to be, in contemporary philosophy, a definite trend towards a fuller recognition of man's inalienable rights as a member in good standing of the world. No longer is he regarded as an alien visitant to this terrestrial sphere. But the first reaction to this recognition of man's place in nature was to deny him any distinguishing quality at all; he was to be treated as you would treat stone or stick or starfish, and his aspirations, hopes, fears, his scientific discoveries, poetic rhapsodies and religious faiths, were all to be explained, if not in terms of electrons and protons, at least in terms of nerve-patterns and glandular secretions. The obvious conclusion was not at first drawn that if man is to be regarded as a part of nature, nature can no longer be fully described in categories that were adequate when matter was conceived as excluding man. Professor Sellars does draw this conclusion. His book is indeed an uncompromising statement of man's wholly natural status. "As every one knows," he tells us, "naturalism makes man wholly a part of nature and localizes both his mind and his body, for these are seen to be inseparable. Man becomes entirely a creature of time and space immersed in the eternal tides of cosmic energy. There is for naturalism no supernatural, or theistic, dimension to give man's life an additional meaning and extension which it does not have upon this earth where he has been born." "I shall seek to show," he continues, "how man is a part of the fabric of the world and that his doing, his knowing and his valuing cannot be understood apart from this status" (p. 1). "Even today, science tends to think of knowing as something additional to the world with which it is concerned, something which it has to take for granted but which it does not understand. With the growth of a naturalistic theory of knowledge harmonious with bio-psychology this traditional attitude toward knowing should disappear" (p. 70). And to make this point even more emphatic he insists that "life and mind must be physicalized" (p. 3); that "that which is physical is real, and that which is real is physical" (p. 13).

But a little farther on this view is given with a very significant addition, when we are told that "everything which exists is spatial and temporal and is either a physical system or is *existentially inseparable from one*" (p. 13, *italics mine*). For the new naturalism must not be confused with crass materialism. "The new naturalism is. . . a new materialism. It is, however, a materialism which has gone to school to epistemology and ontology and which, while not

succumbing to panpsychism, has realized the significance of its stress upon the internal richness of being. Being is not an inert substratum but that which expresses its nature in extendedness, change, connectedness, togetherness, life, mind" (pp. 3f.). "It was because atomistic, mechanical materialism found itself unable to do justice to man's world that dualism and idealism so long dominated thought" (p. 4). "An evolutionary position must hold that material being was *such that* life, mind, and consciousness could emerge with novel organization" (p. 295). "There are, as we have argued, levels of causality in accordance with levels of organization in nature. Moral action is natural action for the kind of creature man is" (p. 458).

One welcomes this revision of naturalism. Man is indeed a part of nature; but nature with man is much more complex and interesting than nature without man, and can be fully described—if at all—only in categories adequate to the emergent levels of man and society. This is not, however, as new an insight as Sellars seems to imagine when he says, "A foundation in the truth of things is needed for sound reconstruction. I am hoping that this book will assist in the laying of this foundation" (p. 2). For this insight, that man is a part of nature and that consequently human as well as physico-chemical categories must be used in explaining nature, is at least as old as Hegel. And in his *Gifford Lectures* (1911–1912) Bosanquet has expounded in Hegelian terminology a doctrine very little different on this point from that of Sellars. Compare, for example, the following passages, the first of each pair from Sellars, the second from Bosanquet's *Value and Destiny of the Individual*: "It follows that a field of consciousness must take its place in nature" (*S.*, p. 411) and, "... we maintain that consciousness actually works in and through the systematic adaptation of a certain type of matter" (*B.*, p. 2); or again, "An evolutionary position must hold that material being was *such that* life, mind, and consciousness could emerge with novel organization" (*S.*, p. 295) and, "Whatever properties are indispensable to make this process [of natural selection] possible we must undoubtedly attribute to living matter"; consciousness "appears within certain special transactions on the part of matter, when highly organized and systematized" (*B.*, pp. 72 and 2).

Why, then, does the new naturalism suppose itself to be teaching a doctrine not only new, but repugnant to idealism? The reason is partly that realists seem incapable or unwilling to distinguish between subjective or Berkeleian and objective or Hegelian idealism. "What I object to in the perspective of the idealist," says Sellars, "is his rejection of the notion of external existence and all that it implies" (p. 57). Has he perchance missed these passages from

Bosanquet: "The natural is necessary to the spiritual, and nothing is to be gained by minimising the distinction between them" (*op. cit.*, p. 2); "In the character of life, we see the abstract and brief chronicle of the external world" (p. 75); "The soul is a range of externality 'come alive'" (p. 129), "... a centre of unification, differentiated by the externality which it unifies" (p. 74). Subjectivism makes matter subordinate to mind, externality a product of thought. But not so the Hegelian, for whom matter and mind, externality and inwardness, are correlative, neither subordinate to the other, but both together constituting reality. The inwardness which has nothing to do with externality Bosanquet denies; and if he speaks of inwardness as "a type of experience superior to externality" (*Principle*, p. 74) it is not because externality is illusory, but because (a) obviously there can be no consciousness of externality except as it is taken into experience, although (b) it must be included in experience in its own character of externality and not in the form of inextended ideas. "If," says Watson, "one begins with immediate feelings as inextended, there is no possible way of making the transition to extended things" (*Interpretation of Religious Experience*, ii, p. 73). Thus Hegelianism is no more subjectivism or mentalism than it is materialism, for it affirms both. For it, extension or externality is as actual, if not as fully revelatory of reality, as inwardness or mind. The idealistic motive (and therefore the justification for continuing to use the name) appears in Hegelianism in this sense of the superiority of *body with mind* over *body without mind*. But the use of the same general name should not lead the student to confuse Hegelian with subjective idealism, which affirms that body is unreal, that only *disembodied mind* is real. Mind is superior, not ontologically but logically. It can not exist without matter, but it reveals the potentialities of matter. There seems little here that is in conflict with Sellars' evolutionary naturalism; and one could wish that, as a mere matter of historical fact, he had been more careful to understand just what Hegelianism teaches. And, whether we agree or not that his new naturalism has been anticipated by Hegel, he might have found in Hegelianism as interpreted by Bosanquet an ally and not an enemy, on this point at least.

On another issue also is Sellars very Hegelian. He does indeed affirm the validity of the scientific method of analysis; "... the complex is composed of the simple." But "I cannot see," he goes on to say, "that the units must be considered to exist out of relations with one another. . . . All the belief in units stands for, it seems to me, is the necessity of some measure of *discreteness* in the ultimate factors of the physical world" (pp. 297f.). He therefore agrees with Whitehead's contention "that matter takes account of other

bits of matter. . . . I do not believe," he says, "that matter is passive and non-relational and merely acted upon by external force" (p. 300). "I hold that individuals must not be taken as units which are afterwards put together into a social group but as differentiated creations within a society becoming ever more complicated and liberative of individual differences" (p. 470). Here, too, the Hegelian heartily agrees.

But there is one interesting point on which Sellars takes issue definitely alike with neo-realism and with idealism, and affirms his faith in critical realism. "*Knowing*," he insists, "*involves a peculiar transcendence*" (p. 76), in the sense that it is "the disclosure of objects by means of ideas which never get beyond the *head* of the knower" (p. 71). "We shall never see the face of external things" (p. 5). "The external thing . . . is never *existentially given* in experience but is *cognitively given* in the sense that it is interpreted and revealed. Knowing is a selective and interpretative act which claims to manifest the object. The thing, so referred to, is external to the act and independent of it" (p. 77). But this theory of knowledge raises the "extremely fascinating problem," "How can we test the truth of judgments about objects if we can never get nearer to these objects than their sensory manifestations?" (p. 59). Indeed a more fundamental question is involved: "Have we a right to speak of a genuinely external physical world? And what is it that we can know about it? The critical realist asserts that we have such a right and that it is the pattern of things that we can decipher, even though we cannot apprehend the stuff of being" (p. 291). "But, it will be asked, how does this conscious mind with all its distinctions and meanings get to the object? My reply is," says Sellars, "that it gets to the object cognitively but never physically . . . the mind never leaves the organism" (pp. 77f.). "The mind does not literally extend to the future and the past. It *thinks* the future and the past . . . by means of and in terms of predicates founded on the present image" (p. 435).

Now, if what this means is that the object outside my head is not inside my head, and that the past event is not a present event, it is a truism which it would be futile to question, but also a tautology which it would seem useless to assert. It seems however to be more than that. "Critical realism represents an attempt to combine directed knowledge with the mediations involved" (p. 59), to affirm, namely, that the foreshortened image is not the physical object, nor the present memory the past event, while yet the one means or is directed at the other. But surely knowing was never taken to mean anything else than just this objective reference of the brain-event to something that is not the brain-event. At least that is what it means

for the Hegelian; and when he affirms that the distant object and the past event are known in their own right, and not merely inferred from inextended ideas and present memories, he does not mean that they are sensorily present, but that they are (a) present to thought and (b) continuous with what is sensorily present. If this is what Sellars means, then the Hegelian can agree with him when he affirms that "the entity selected as object is not *given* but . . . *disclosed*" (p. 418); or, more correctly, is given not *existentially* but *cognitively* (p. 77). But what can disclosure or cognitive givenness mean if not that we know the object or event disclosed and can therefore distinguish it from what is sensorily given. The brain-event does not get to the external object or distant event physically; this may be readily acknowledged. But it does get to it cognitively, and this is all that need be affirmed to justify the claim that we know reality in its own right. Neo-realism—if its doctrine of the mutual independence of the constituent elements of reality be taken literally and baldly—is, since it identifies the object given and the real object, debarred from explaining our sense of the inadequacy of knowledge. For if each event exists in its own right, then, as Russell logically concludes from his own premisses, nothing need or can point beyond itself, so that, for all we know, the universe may have come into being at this instant and memory may be fallacious in making me think I and my world have previously existed or that the present experience is part of a wider world. If each item of experience is self-sufficient, then it becomes impossible to explain the sense we have, when perceiving objects or events, that there is more to them than we perceive. Sellars is right in insisting upon the "peculiar transcendence" of the act of knowing; and he seems to me to be right also in holding that neo-realism can not explain this situation. But critical realism surely draws an unnecessary conclusion when it affirms that because there is a factor of transcendence in knowing, therefore the real object is never directly perceived. Hegelianism, with its doctrine, which Sellars also advocates, that the elements of reality are not passive and non-relational, but mutually imply each other, can both affirm, with neo-realism and common sense, that in knowledge it is the object itself that is known; and can also acknowledge, with critical realism, that I do not know the whole object or all that can be known about it. Knowing, just because it "involves a peculiar transcendence," need not therefore be directed at a wholly transcendent object; the object may be directly, yet only partly, known. Had Sellars been willing to acknowledge this possibility, which surely sounds like common sense, he would have been saved the trouble of developing a most ingenious theory of perception which should deny the givenness of objects while yet avoiding the representative realism of Cartesian philosophy (pp. 38, 108ff., etc.).

It is a matter of regret that Sellars should have given so little space to the topic of the last chapter, "The Nature and Status of Value." We could well have done with a somewhat abridged discussion of the topics of the earlier chapters if only the interesting suggestions of this chapter had been more fully developed. That man, since he is wholly a child of nature, can entertain "no further hope of special cosmic succor" (p. 7), i.e., I take it, is not the recipient of special supernatural favors, does not mean for Sellars that man is but a lump of animate matter. "Man is wholly a part of nature but has the capacities which give him rational freedom. . . . Moral action is natural action for the kind of creature man is" (p. 458). It would have been most interesting therefore to see what the evolutionary naturalist has to say about the problems of human values concerning which men are today looking everywhere for light; and where should they look with more hope than to philosophy? And had this book been written with a greater sense than it indicates of the contributions of preceding and contemporary thinkers to philosophy as a great corporate enterprise, rather than as being a substitute for outmoded systems, it might well have been, if not an outstanding contribution to human thought—these are very rare—at least a most valuable and stimulating record—and as such a permanent record—of a very interesting period in philosophic thought. As it is, it deserves careful study and should prove very stimulating.

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Music and Meaning. ELIZABETH ROBINSON WOODS. Cambridge: Harvard University Press. 1932. ix + 101 pp.

In the course of an argument for music as the only "pure" art leading to the central theory of this little book, or meaning as structure, Mrs. Woods discusses, with charm usually and with insight sometimes, a wide range of subjects including the relation of art to science, logic, morality, and religion, and the relation of meaning to denotation, value, and substance. But instead of clearing the way for a solution of the problem of meaning her philosophy of art itself represents a new confusion. The author in fact seems to have taken music's particular expression of the general art principles as a norm for the entire art field, and thus the relation of the art-form in music to its differing expressions in the different arts is confused with the relation of the form of any particular art to its content. We read on page 56 that "although in all art form and content are inseparable, complete fusion is an ideal rather than an accomplished fact for poetry and the fine arts," when the truth is that if form and content are not completely fused the result is fatal

to any art. Mrs. Woods contends nevertheless that only music reaches the art ideal, and we can not but wonder why all the other arts should want to be music. To be sure, Poe, whom the author cites as having attained a high degree of perfection in his attempt at "pure poetry," i.e., poetry depending for its effect chiefly on sound and rhythm, once called this art an inferior, less capable music, but he was evidently looking at poetry just from the standpoint of melody, an integral element of poetry, but surely not its principle of unity.

Mrs. Woods takes for music's aim the representation of the thinking or feeling processes and she is probably right. Music has been held by others with equal reasonableness, however, to represent things as various as space-time, ideal motion, or love-in-search-of-a-word. But the point here is only that an art's particular field of representation requires its own expression of the pervasive art categories, unity, harmony, and rhythm; and no one art's handling of these categories in realizing its purpose is to be taken for the ideal of the other arts. There are other things in life to be represented besides thinking processes, ideal motion, or even space-time. To maintain that music represents the processes of thought as distinguished from the contents of thought is to say that music has recognizable limits as an art. But it does not follow that "music has nothing to do with particular denotations" (page 57). As a matter of fact the universality represented by music is obtained just by the presence of particularity which, though implicit, is actual.

Finally, in taking any esthetic experience as illuminative of the problem of meaning it is necessary to remember that art is expression or communication only within a limited range of communicability. Further, the limits of each art are jealous limits. One form of art can not be translated into another. Nor, as Mrs. Woods points out, can any art expression be translated into words. It is equally true, however, that the relation of one art to another is quite different from the relation of words to the whole field of symbolization. Between the representation in art of an object of thought and an algebraic code there is, of course, a universe of difference. But the exact, concise symbols of the latter as used in mathematics and logic so far from forming "another sort of language" (see page 53), are prevented from being even half a language just by their failure to embody the all-important contextual aspect. And if we "rapturously perceive" in music's representations, and "know" in the equations of symbolic logic, it is still impossible to convey to others by any other than word media this perception or this knowledge.

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Prejudice and Impartiality. G. C. FIELD. New York: Robert M. McBride & Company. 1933. 116 pp.

Professor Field of the University of Bristol, who is general editor of Methuen's Monographs on Philosophy and Psychology (published in America by McBride), contributes as the fifth volume of the series this little elementary essay, which may serve to make the casual reader more aware of the innumerable pitfalls that open before the person who desires to attain impartiality in his thinking. The author, acknowledging his debt to the now classic analysis in Professor Dewey's *How We Think*, defines prejudice as "the influence on our thinking of any feeling, impulse, or motive which is not relevant to the immediate purpose of this thinking"; and then goes on to show how commonly it enters at the different stages of reflective thought. His case for impartiality is assumed rather than proved, although he recognizes that the prejudiced man may be right, and the impartial man wrong in any given case; and that "the danger of taking more interest in a man's psychological condition than in the actual merits of his arguments is a particularly grave one." Professor Field is not taken in by the claims that the study of science promotes impartiality in other realms; yet he seems to rely upon education to make people prejudiced in favor of impartiality.

HAROLD A. LARRABEE.

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JOURNALS AND NEW BOOKS

REVUE D'HISTOIRE DE LA PHILOSOPHIE ET D'HISTOIRE GÉNÉRALE DE LA CIVILISATION. Nouvelle Serie, Fasc. 2. *In Memoriam*, Georges Lefèvre: *Henri Potez*. La genèse de l'alphabet d'après les découvertes récentes: *J. G. Février*. Le libertinage de Th. de Viau: *A. Adam*. Sur les *Deux Infinis* de Pascal: *René Jasinski*. Introduction bibliographique à l'étude des sources de la science ethnographique dans l'*Encyclopedie*: *René Hubert*. Erratum en vue de la 2^e édition du *De Beneficiis* (F. Préchac). Petit courrier de Vaugelas.

College of the Pacific Publications in Philosophy. Volume II, 1932-1933. Edited by Paul Arthur Schilpp. Stockton, California: College of the Pacific. 1933. 136 pp.

Hahn, Hans: *Logik, Mathematik und Naturerkennen*. (Einheitswissenschaft, Heft 2.) Wien: Gerold & Co. 1933. 28 s. 1.50 M.

Overstreet, H. A.: *We Move in New Directions*. New York: W. W. Norton & Co., Inc. 1933. 284 pp. \$3.00.

WEDNESDAY, SEPTEMBER 6

8:00 p.m.

Annual Smoker

THURSDAY, SEPTEMBER 7

9:00 a.m. to 12:30 p.m.

Metaphysics: The Domain of Ignorance*Paul Weiss*Emergents *sub Specie Aeternitatis* Charles M. PerryEvent and World-Point *A. Ushenko*

On Meyerson's Theory of Identity and the Irrational

Philip Paul Wiener

Pragmatism and Metaphysics Charles W. Morris

2:30 p.m. to 4:00 p.m.

Round Table I: Metaphysics

The Idea of the Individual in Russian Philosophy*N. Lossky*

4:30 p.m.

The Carus Lectures

I. Philosophy as Vision *Wm. Pepperell Montague*

FRIDAY, SEPTEMBER 8

9:00 a.m. to 12:30 p.m.

The Nature and Function of Definitions in Deductive Systems

Karl Schmidt

Causality and Teleology in the Cultural and Social Sciences

Bonno Tapper

Many Logics or One? *David F. Swenson*

Some Problems for a Relativistic Epistemology . . . *A. G. Ramsperger*

The Predicament of Naturalistic Empiricism, John Dewey's Ineffable *Howard D. Roelofs*

2:30 p.m. to 4:00 p.m.

Round Table II: Positivism

Logical Analysis of the Psycho-Physical Problem: A Contribution of
the New Positivism (Viennese Circle) *Herbert Feigl*

4:30 p.m.

The Carus Lectures

II. Democritus and the Vision of a World of Atoms

Wm. Pepperell Montague

7:00 p.m.

Annual Dinner

Presidential Address: The Greek Conception of Nature

M. T. McClure, President of the Western Division

SATURDAY, SEPTEMBER 9

9:00 a.m. to 12:00 a.m.

The Relativity of the Physical World in Relation to the Absolute
Character of Value *John S. Marshall*

The Basis of Social Ethics *Charner M. Perry*

The Social Ethical Implications of Confidence ... *Howard O. Eaton*

Acquiescence as an Ethical Concept *Theodore B. Brameld*

12:00 a.m.

Business Sessions

2:30 p.m. to 4:00 p.m.

Round Table III

Aesthetics

Conducted by D. H. Parker

The Relation between Form
and Association in Art

Van Meter Ames

The Aesthetic Response: An
Antinomy and its Resolution

Milton C. Nahm

Round Table IV

Ethics

Conducted by T. V. Smith

The Need of Sophistication in
Ethics .. *Albert R. Chandler*

The Absolutes of Pragmatic
Ethics *Maurice Baum*

4:30 p.m.

The Carus Lectures

III. Plato and the Vision of Eternal Things

Wm. Pepperell Montague

The headquarters of the meetings will be at the International House at the University of Chicago, 1414 East 59th Street. Reservations should be made through Professor Charles W. Morris, University of Chicago.

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CLIFFORD BARRETT.
The Definition of Idealism. EDGAR SHEFFIELD BRIGHTMAN.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 17. August 17, 1933.

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THE JOURNAL OF PHILOSOPHY

RECENT DEVELOPMENTS IN INDIAN THOUGHT

IT WAS my good fortune to be in Calcutta just before the annual meeting of the Indian Philosophical Congress for 1932, and my additional fortune to find Professor Hocking in the city. As the Congress was to be held in Patna, we decided to attend it, and a very rewarding experience it was. Several of the papers read were of a high order, and both from them, from the open discussions, and from conversation with many individual thinkers I carried away the impression that contemporary Indian thought is very much alive.

The same impression has been brought home to me since my return to this country by an examination of the recent philosophic literature (whether by Indian or by Western students) which has grown out of Hindu and Buddhist philosophy. A considerable portion of this literature, as might be expected, is in the form of exposition of some of the classic systems of Indian thought; but much of the writing is done in intelligent and independent fashion by men who are acquainted with Western as well as Eastern systems, and whose aim is not merely historical but truly philosophical, namely, to throw further light upon our common problems.

One of the best of these expositions is Professor M. Hiriyanna's *Outlines of Indian Philosophy*,¹ which, though its aim is primarily expository, is written with both critical judgment and sympathetic insight. Although it does not go as deeply into the history and problems of Indian thought as do the much larger treatises of Radhakrishnan,² Dasgupta,³ and Belvalkar and Ranada,⁴ no one could call it superficial; and in fact its smaller compass is in one way an advantage, as it enables the Western reader who has no large acquaintance with the long and involved story of Indian philosophy, to grasp the whole tale in synoptic fashion. Professor Hiriyanna interprets sympathetically the positions of all the schools, but his own preference is plainly for the Advaita Vedanta, which he presents with surprising persuasiveness. He is particularly happy in his exposition of the Vedantic teaching concerning the nature of objects and illusory objects; though it can not be said that he succeeds in

¹ British Edition by Unwin; American by Macmillan; 1932.

² *Indian Philosophy*; Macmillan.

³ *A History of Indian Philosophy*; Cambridge University Press.

⁴ Published in Poona, in five volumes.

vindicating the Advaita position that the objective world of multiplicity is real and that nothing is real save the One.

Students of contemporary epistemology and logic will find special interest in Professor D. M. Datta's *The Six Ways of Knowing: A Critical Study of the Vedanta Theory of Knowledge*.⁵ Dr. Datta's aim is not an exposition of the whole system of the Vedanta, but a critical examination of its epistemology, its logic, and (in some sense) its psychology, in the light of rival Indian doctrines, but especially in their relation to contemporary Western thought on these themes. There are, I am constrained to believe, very few scholars east or west so well equipped for this task as Dr. Datta. I can think of no Western Sanskritists who have anything like his acquaintance with contemporary British and American philosophy; and I feel sure that no Western philosophers can compare with him in knowledge of Sanskrit philosophical literature. Nor is Dr. Datta's reading of Western thought merely verbal or superficial. He sees the point of the logical discussions of Russell, Alexander, Bradley, Montague, Hobhouse, the epistemological positions of James, Perry, Moore, Lloyd Morgan, Stout, and the general philosophical views of many another Western authority. In the light of this wide reading, he defends most of the positions of the Vedanta with surprising effectiveness.

The "Six Ways of Knowing" are the six sources of knowledge recognized and relied upon by the Vedanta. These are the following: perception, comparison, "non-cognition" (apprehension of non-existence), inference, postulation (the making of hypotheses necessary to explain otherwise inexplicable existants), testimony (including the authority of Scripture). That these themes involve many nice questions of contemporary discussion in logic, psychology, and epistemology will be evident to all; but many Western readers, I believe, will be surprised to learn of the various subtle distinctions and of the logical care with which these questions have been discussed for a millennium and more by Indian thinkers, and will find intellectual delight in following the skillful argument of Dr. Datta in his defense of the Vedantic view against actual or possible Western criticisms.

A work of a more controversial tone is Dr. S. K. Das' *Toward a Systematic Study of the Vedanta*.⁶ The author is well read in the literature of Neo-Hegelianism, and his aim is in part an exposition, but chiefly a defense, of the Advaita Vedanta in terms of Hegel and especially of Bradley. In this he is to some extent following in the footsteps of the late V. J. Kirtikar, whose *Studies in Vedanta*⁷ deserves a much wider reading in the West, especially among Neo-

⁵ London: Unwin, 1932. Dr. Datta is Professor of Philosophy in Patna University.

⁶ Calcutta, Sri Gouranga Press. 1931.

⁷ Bombay: Taraporevala; 1924.

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Hegelians, than it has enjoyed. I must confess that for a rather tough-minded realist like myself, Dr. Das's Hegelian exposition of Sankara makes as difficult reading as Bradley and Bosanquet. The three central chapters of his book, devoted to the argument in favor of the Advaita conception of reality and the world of appearance, are entitled "Analysis of Experience," "The Dialectic of the Vedanta," and "Brahman and Maya; the Metaphysics of the Vedanta." The first of the three aims to show that the Absolute Self is presupposed and also discovered in all experience. The second (on "Dialectic") in Bradleyan fashion seeks to justify Sankara's denial of difference and of the reality of all relation. The third, as its name implies, deals with the central difficulty of the Advaita already referred to, the problem, namely, of reconciling the duality and multiplicity of the world of appearance, which Sankara frankly recognizes, with the denial of all duality and the insistence that only the absolutely unitary Brahman is real. The relation between Brahman and the world is one of causation, but only in the sense that Brahman is the Reality illusorily appearing under the form of the Many. And this conception is reconciled with the Vedantic denial of the reality of relation by pointing out that the World of Appearance is not real, and hence there is no relation between it and the One. "Thus the standing problem of philosophy—the relation of the finite to the Infinite—does not arise for Sankara at all." "The question as to how or why the One or Brahman becomes many or the world is an illegitimate one according to Sankara. The hypothesis of 'Maya' is invoked just to indicate the ultimate and therefore inexplicable nature of this fact." . . . "The charge is often laid at the door of Sankara's philosophy that it fails to account for the realm of appearances, or *Maya* itself. Well, this *Maya* is a solid fact which we have to accept as such and not to account for . . . *Maya* is merely the admission of the fact of individuation but is no explanation." Whether the reader will be satisfied with this sort of reconciliation between two mutually contradictory concepts will depend, I expect, upon the reader.

K. Sastri (Lecturer in Philosophy in Calcutta University) in his *Mallick Fellowship Lectures for 1930-31*,^s presents and defends a slightly different view of Sankara's Advaita than does Dr. Das. Mr. Sastri has been but slightly influenced by Western thought, seems quite innocent of Bradley, and in presenting his Vedanta has his eye solely on the Sanskrit sources with no wandering of his thoughts toward the British Hegelians. Possibly as a consequence of this he presents a distinctly more realistic picture of the world of multiplicity than do the more Westernized Indians, leans more upon the concept of causation in its usual sense, and is not afraid of admitting

^s Published by the University of Calcutta. 1931.

some distinction (though no separation) between Brahma and the world of appearance. The world of appearance is a cosmic Maya, and is not due to our individual ignorance. There is a real distinction between it and Brahma though no separating difference. It is not illusion. In fact the author turns the tables on those who would call the world unreal by pointing out that to do so is "to make it separated from Brahma, to make it different from, or to put it *outside* of Brahma." "Objects must be something *for themselves* ere they can be something to one another. . . . If you assume that the individual is simply its *relations*, then it may be deprived of any being for itself in one Identity—in the Whole—which includes all, where all the elements are determined in *relation* to one another and to the whole. But if in one sense the qualities or universal relations belong to the Reality as a whole, these are grounded in the various activities of *individual* objects. In this immanent view the distinctive differences which separate the experiences of one Self from another would be unintelligible. But the Transcendental Principle does not reduce these individual centers to mere appearances, but connects and correlates them so that each may serve the purposes of the whole; yet it allows to each its own functions and activities, as it *distinguishes* itself from them and is not *lost* in the elements it unifies and connects" (p. 134). Such a view of the Vedanta as this plainly leans far in the direction of Ramanuja. Mr. Sastri, although calling himself a follower of Sankara, is aware of the difficulties involved in the extreme form of the Advaita and does not mean to subject himself to them. His little volume, though far less promising in external appearance to the Western reader than most of the other books referred to in this article, shows a Sanskrit scholarship and an independence of thought that make it decidedly worth reading.

An Indian thinker whose philosophical position has not as yet been published in book form, but who has expressed himself in a number of separate essays, is Professor P. B. Adhikari, of Benares Hindu University. Professor Adhikari unites very wide reading in both Indian and European philosophy with considerable critical ability, and combines these upon a background of Indian mentality and temperament at its best,—metaphysical, contemplative, mystical. In a series of articles in several Indian periodicals and in papers read at Indian Philosophical Congresses,⁹ he has not only traced parallel courses of various important concepts in European and Indian thought, but has subjected them to criticism, and pointed out, in faithful adherence to the traditional thought of India, that

⁹ *The Spirit of Indian Philosophy*, in the Malaviya Commemoration Volume (1932); *The Problem of Sense Knowledge*; *The Problem of the Universal: One or Many?*; *A Side View of Jainism*; *The Problem of Relations: Fact and Fiction*,—published in the Reports of the Indian Philosophical Congresses.

the final solution of the problems involved will need the contribution of something like mystical vision, or the higher intuition.

Indian thinkers usually insist that this intuition is needed fully to comprehend the Vedanta: in fact Yoga training is frequently a regular part of Vedanta study in the more thoroughly Indian schools. It is perhaps because of our lack of this training and our lack of the inherited Indian temperament that we often sense a veil between our thought and that of the Indian writers whose books we read, and hence occasionally turn with greater hope to a book on Indian philosophy written by a Western scholar. If with this anticipation of finding something both more comprehensible and more persuasive the reader takes up René Guénon's *Man and His Becoming According to the Vedanta*¹⁰ he will be seriously disappointed. In saying this I do not mean that Guénon is lacking in scholarship, insight, or understanding of the Vedanta. I mean that his exposition and argument are less comprehensible and far less persuasive than the reader naturally anticipates from a man of the author's learning and background. Doubtless several reasons conspire to bring about this result, but two are particularly noticeable. The first is the rather surprising presupposition of Guénon's entire work, that the Vedanta is the supreme and absolute truth, that the ancient books on which it is founded teach but one doctrine, and that their authority is not to be questioned. Like so many converts to a religion not theirs by birth, he exhibits a more enthusiastic, unquestioning, and absolute orthodoxy than most of those born in the Faith. In striking contrast to many recent Indian writers, Guénon knows nothing of different strata of tradition within any of the Upanishads, nothing of any divergence in doctrine between different Upanishads or between any of them and the Bhagavad Gita; he has no doubt that the Brahma Sutras invariably interpret the Upanishads correctly, and that Sankara's interpretation of them is beyond criticism. No appeal from these inspired and "orthodox" writings is permitted, and the possibility of doctrinal variation or uncertainty within them is not for a moment entertained. Plainly to construct one self-consistent doctrine out of all these sources will require considerable skill in exegesis, but Guénon never loses courage, and (like many Western Biblical exegetes) is able to perform wonders by taking recalcitrant passages not literally, but analogically.

A second characteristic which makes Guénon's interpretation of the Vedanta both less persuasive and less understandable than the reader may well have hoped to find it, is his extreme and dogmatic Absolutism, combined with a steady and un pitying contempt for all

¹⁰ English translation by Charles Whitby. London: Rider and Co.

who differ from him in philosophy, and a choice of technical terms which he shares with very few philosophers of either East or West. He uses his own language, and he speaks always *ex cathedra*: let those who differ be anathema. The Vedanta, we are told, is not philosophy: it is metaphysics. It deals with Personality or Self which is a very different thing from individuality, and is not to be confused with human individuality nor with what Western writers refer to as divine Personality. "Personality is essentially of the order of principles in the strictest sense of the word, that is, of the universal order: it can not be considered except from the point of view of pure metaphysic, which has precisely the Universal for its domain. The pseudo-metaphysicians of the West are in the habit of confusing with the Universal things which, in reality, pertain to the individual order: or rather, as they have no conception at all of the Universal, that to which they fallaciously apply this name is usually the general, which is properly but a mere extension of the individual" (p. 30).

The title of the book (in the original *L'Homme et son Devenir selon le Vedanta*) is a rather odd choice for a work which presents us with so utterly static a universe. Man, for Guénon, does not really "become"; nothing real ever becomes. The truly real (and nothing is truly real save Reality) eternally *is*. Only the illusory changes and all change is illusory. The Real, so far as anything can be said of it, is Personality, *Atma*. *Atma* (or *Purusha*) in itself is unmanifested. That manifestation may be produced, it enters into correlation with the primordial undifferentiated substance (*Prakriti*), which is ultimately derived from It. All finite things (including human individuals) are manifestations of *Atma* (correlated with *Prakriti*). But this must not be taken to mean an admission of anything but the most extreme unity. Although there are "different degrees of the manifestation of *Atma*," "it must not thence be inferred that *Atma* manifests itself in any way, since it never enters into manifestation. . . . In other words *Atma* is 'That by which all is manifested, and which is Itself manifested by nothing.' " These sentences are typical of the repeated efforts of the author to recognize a world of finite multiplicity and yet deny that anything is real save the unutterable One. The means of reconciling these seemingly inharmonious positions is nowhere expounded, unless we are content to find a solution of this central logical difficulty of the Advaita Vedanta in the formula of *illusory appearance*. Why the illusion should appear, or who it is that is under the illusion, is never explained.

It must not be supposed that all Indian thinkers are oblivious to the serious difficulties which Guénon, and several others of the

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writers whose books we have dealt with, skate over so lightly. The followers of Ramanuja, though by no means so vocal as the followers of Sankara, are still numerous in India; and occasionally a free lance, who does not care to identify himself with either school, examines the positions of the Advaita in purely objective and critical fashion. The best examination of this sort that I have come upon is to be found in a paper entitled "The Theory of Ignorance in Advaitism," read at the Patna Philosophical Congress by Dr. Rasvihary Das (Professor of Metaphysics in the Amalner "Indian Institute of Philosophy"), which is included in a cooperative volume by three members of the Institute, namely G. R. Malkani, R. Das, and T. R. V. Murti. The title of the book is *Ajnana: the Theory of Ignorance*.¹¹ After giving a sympathetic exposition of the Advaita attempt to retain objectivity in the world of appearance, the author shows that it is quite impossible to do this and remain true to the fundamental doctrine that the Absolute alone is real and that It is an undifferentiated unity of pure consciousness. The world of multiplicity is therefore appearance only, and as such it is to be understood only from the subjective point of view and must be due to ignorance. This having been established, there follows a searching criticism of the concept of cosmic ignorance (*ajnana*). Difficulties are piled up cumulatively, and in a crushing climax the essentially self-contradictory nature of Sankara's denial of ultimate reality to the world of particulars is driven home with a thoroughness that the keenest Western critic might envy. Mr. Malkani and Mr. Murti, in their contributions to the volume, defend the orthodox view of Ignorance and Monism. Their defense is exceedingly clever, but, to my thinking at any rate, it can not be said that they have any real answer to the criticisms of Dr. Das. Limitations of space prevent my presenting their arguments: suffice it to say that their position seems ultimately based upon a confusion of the *false* with the *non-existent*.

A book of quite a different sort, but of unusual interest and peculiar charm, is S. E. Stokes' *Satyakama*.¹² Readers of C. F. Andrews' recent story of his own religious development (*What I Owe to Christ*) will recall his account of his friend Mr. Stokes, the American missionary who with Sadhu Sundar Sen founded a celibate Order in India and took the vow of poverty in order to come into closer contact with the Indian peasants; and who, finding that this plan of life only separated him farther from the life of India, gave it up, disbanded his Order, married an Indian woman, and settled down in a village on the edge of the Himalayas to be one

¹¹ Luzac: London. 1933.

¹² Published by Ganesan, Madras, 1931.

with the people of his choice. During his many years in India Mr. Stokes has made a serious study of Indian thought, and has found much in it of great philosophical and religious appeal; and about a year ago, in order to break down the last wall of separation between him and his Indian fellows to whom he is devoting his life, he took the final step and publicly declared himself a Hindu. Politically he had identified himself with India long before he did so religiously. For some years he has been a member of the Congress Party, and in 1921-1922, for participating in Mr. Gandhi's non-coöperation movement, he was arrested and confined for several months in the Lahore jail. He took advantage of this enforced leisure to bring together and express his thoughts upon the deeper cosmic and religious problems in the form of a long statement to his wife. Largely through the advice of Mr. Andrews, to whom he later showed the manuscript, he has now published this strange but beautiful love-letter, in the book which he calls *Satyakama*, or "True Desires."

The philosophy here suggested is based in part upon the Upanishads and the Bhagavad Gita and Ramanuja's Commentary, with considerable modifications drawn from Christianity, but still more from the author's own experience of human and divine love and from his own thinking. Reality, in orthodox Indian fashion, is called one and is called Brahman; but its unity is far from that of Sankara's Advaita. For the central part of Mr. Stokes' Brahman is the "timeless" but personal Paramatman, whose fundamental character is the need to love and to be loved. "The Divine Nature alone and apart is not a perfect unit of experiencing being. The perfect unit of experiencing life is the Divine and timelessly self-sustaining Existent One plus that complementary and subordinate area of reality timelessly sustained in being by it. . . . Neither of them is capable of being conceived as without the other" (p. 57).

This dependent "other" consists of two parts, Purusha or universal and potential Soul, and Prakriti which we might translate the stuff of experience. Though both of these are dependent on Paramatman, neither has a beginning in time, both are by It eternally generated. Purusha is only potentially conscious, but from it are derived, in an eternal progression, countless individual selves, who in the course of evolution and transmigration develop into personalities of finer texture and wider grasp and broader sympathy. Mr. Stokes has shown considerable ingenuity and surprising persuasiveness in combining Western biological and sociological conceptions with Eastern religious and philosophical ideas in his picture of the advance of these finite selves at first into self-consciousness, then through what he calls the Great Illusion of a

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separating individualism, to a new unity of love and onward toward an increasingly wider identification of self with all other finite personalities. Parallel with this growth in social consciousness goes the growth in the mystic consciousness of close relationship to Paramatman, the timeless but loving God. In one sense each human self is identical with the (potential) Purusha, and certainly it has no being save that derived from God: but the relation between the human self and the Divine is not that of identity as taught by Sankara. Enough of individuality is left to satisfy the demands of what Mr. Stokes considers the most fundamental and cosmic of all desires, that of loving and being loved. It is unfortunately impossible in the brief extent of this review to give any idea of the ingenuity, persuasiveness, and charm with which the author has woven into the rather technical outlines of this philosophy many of the finest conceptions of Hinduism and of Christianity, and many of the deepest insights of human life, idealistic love, and religious experience.

The introspective nature of the Indians has from the earliest times tended to give them an interest in psychology, and each of the leading philosophies of India has developed its own psychological doctrines and theories. Buddhist psychology has been analysed and expounded by several Western scholars, and discussions of various forms of Hindu and Jaina psychological teaching are available in various English, German, and French books. But so far as I am aware no thorough and analytic treatment in English of the whole field of Indian psychological thought had appeared until last year. The book in question is the work of a young man of great promise, Mr. P. V. Pathak, and is entitled *The Heyapaksha of Yoga: Towards a Constructive Synthesis of Psychological Material in Indian Philosophy*.¹³ The author has a surprisingly wide acquaintance both with the Indian sources and with recent (though not with contemporary) Western psychological literature. He expounds from first-hand acquaintance the psychological teachings of Vedanta, Samkhya, Yoga, Nyaya, Buddhism, and Jainism, and he systematizes his expositions by following the concepts and categories of Western thought, under the leadership of such writers as Stout, Mach, Ward, James, McDougall, Baldwin, Brett, Bosanquet, Whitehead, Bergson. The task he has undertaken is one of peculiar difficulty, for Indian psychology, though filled with subtle distinctions, is bewilderingly mingled with purely ethical concepts, Yogic practices, and metaphysical notions; and some of the major themes of Western psychology are almost omitted from Indian psychological treatises. Mr. Pathak has been well aware of these difficulties, has done what

¹³ Lahore: 1932.

he could to disentangle the psychological from the non-psychological, and where direct treatment of a subject (as in the case of emotion) was not to be found, he has gone out of the strictly psychological literature of his people and laid under contribution their incidental teachings upon the subjects in question hidden away in books upon poetics or allied themes. On the whole it must be said that Mr. Pathak's "Constructive Synthesis" is a contribution of great value to the student of Indian psychology.

If space permitted, something should be said of Aurobindo Ghose's *Essays on the Gita*,¹⁴ T. V. S. Row's *New Light on Fundamental Problems*,¹⁵ (a discussion of the relation between Bergson's philosophy and Indian thought:) K. F. Leidecker's *Josiah Royce and Indian Thought*,¹⁶ Dr. Bhagavan Das's *The Unity of Asiatic Thought*,¹⁷ and J. C. Winslow's *The Art of Contemplation*.¹⁸ But something must be said before I close about certain recent books that belong not to Hinduism, but to the other great religion which has its source in India, Buddhism. Concerning these, however, I must be very brief, both out of respect for my reader's patience, and also because none of the works in question were written by Indians. They deal with ancient Buddhism and hence are only indirectly related to the general theme of this paper. By far the most important of these recent books is Th. Stcherbatsky's *Buddhist Logic*.¹⁹ This is published in two solid volumes, the second of which appeared first (in 1930) and is devoted to a translation of Dharmakirti's *Nyaya-Bindu*. Volume I, which for most readers will be the more important, was published last year, and is a treatise (by Stcherbatsky) on the whole field of Buddhist Logic, its history and development, its content, and a comparison between it and the logic of the West. In saying that it covers "the whole field of Buddhist Logic" I have perhaps said too much, for Stcherbatsky confines himself almost entirely to the logical teachings of Dignaga and Dharmakirti and their disciples (of the sixth and seventh centuries); while much earlier Buddhist writers certainly made use of quite specific logical principles. One of these earlier principles—viz., the denial of the Excluded Middle—which goes back to the Nikayas and purports to have been used by the Founder Himself, is in direct contradiction to the position of Dignaga and Dharmakirti, and is used enthusiastically by Southern Buddhists today—as I have learned most disconcertingly in arguments with some of them.

¹⁴ Calcutta, Arya Publishing House.

¹⁵ Published by the University of Madras, 1932.

¹⁶ New York, Kailas Press. 1931.

¹⁷ Benares, The Theosophical Society.

¹⁸ Calcutta, Association Press. 1931.

¹⁹ Leningrad, 1930 and 1932.

In spite of this it is true that by the term "Buddhist logic," when used as referring to a system, the works of Dignaga and Dharmakirti are always and properly intended.

The general position elaborately expounded by these two thinkers covers not only logic in the limited sense, but also the fields of epistemology and (to some extent) of ontology, and constitutes one of the two great logic systems of India—the other being, of course, the Hindu system which, with variations, is shared by all the "Six Schools" and is most explicitly expounded by the Nyaya. To the Nyaya teaching, indeed, Dignaga and Dharmakirti were considerably indebted, but the variations they introduced were so great as to distinguish Buddhist logic as a separate system. To the specialist on Indian philosophy the relations of this system to the Hindu logics, admirably presented by Stecherbatsky, will be of value: for the philosopher of the West, of course, the chief interest of the book will lie in the striking similarities and striking divergencies between the Buddhist logic and our Aristotelian and later systems. Especially worthy of mark are the sections on knowledge and reality, on sense perception and the relation between sensation and conception, on the nature of causation, on the syllogism, and on the law of contradiction. Both in breadth of scholarship and in general appeal, Stecherbatsky's *Buddhist Logic* is a great book, exceeding in value both his earlier works.²⁰

The year 1932 marked the appearance not only of the second volume of Stecherbatsky's *Buddhist Logic*, but also of Professor D. T. Suzuki's translation of the *Lankavatara Sutra*.²¹ He had prepared the way for this by his *Studies in the Lankavatara Sutra*,²² a work of great learning and considerable insight, which, in addition to its detailed treatment of the Sutra named, contained a long discussion of Zen Buddhism, thus supplementing the author's admirable *Essays in Zen Buddhism*,²³ published in 1927.

The *Lankavatara Sutra* is the most important written source of Zen, and one of the most inclusive of all the Mahayana Scriptures. The date of its writing is unknown: in fact it probably was put together during the course of several centuries. Part of it was translated (from Sanskrit) into Chinese in A.D. 443. It has always been considered one of the most important of the Mahayana Scriptures—and one of the most difficult. Professor Suzuki has performed a remarkable task in putting this enigmatical book into

²⁰ *The Central Conception of Buddhism and the Meaning of the Word Dharma*: London, 1923; and *The Conception of Buddhist Nirvana*: Leningrad, 1927.

²¹ London: Routledge.

²² London: Routledge. 1930.

²³ London: Luzac.

fairly intelligible English, and the student who wishes to go to the bottom of Mahayana Buddhism (or particularly of Zen) with only our Western languages as a tool will owe a real debt to this very able Japanese scholar and thinker. The philosophical and religious teachings of the Sutra are so difficult to grasp that most readers will do well to take refuge in the earlier "Studies." A semi-popular presentation of the content of both volumes has been written by Mr. Dwight Goddard, under the title *A Buddhist Bible*.²⁴ I might add in passing that Mr. Goddard has just completed a similar interpretative work entitled *The Principle and Practice of Mahayana Buddhism*,²⁵ the aim of which is to give a simplified account of Ashvaghosha's *Awakening of Faith in the Mahayana*, based upon Suzuki's translation of that scripture which appeared in 1900.

One more book on Buddhism which appeared in 1932 must be noted before I close this report (if so I may call it), namely, Mrs. Rhys Davids' *Manual of Buddhism*.²⁶ This is not a rewriting of her husband's famous book of the same title, but an entirely fresh work. In it she continues the effort she had begun in *Gotama the Man*,²⁷ and in *Sakya or Buddhist Origins*,²⁸ to pierce beneath the monastic accretions and editings which in her opinion have made the Buddhist canon a kind of palimpsest, to what she regards as the real man and his original teachings. The "no-self" dogma, she insists, is a monkish interpretation of a very different doctrine: the Founder taught a real self of the Upanishadic sort, and stressed not passivity but moral activity, not decay and unmaking but becoming. In this he was, in her opinion, simply carrying further some of the central thoughts of the Upanishads. As she has expressed it in an article in the *London Quarterly* for October, 1932, there was always in the Upanishadic "Thou art That" a relation, namely, "the relation between the Thou and the That, of the making identical. This the Upanishads taught as a work of coming-to-know, of realizing an *idea*. Gotama taught this was not enough. The making identical was a very long work of becoming, of *making* to become. He taught the 'man,' i.e., the 'soul,' as not a fixed static 'is' but an ever-moving 'becoming.' "

Two of the books referred to in this article deal with this question of the *no-self* doctrine—namely, Hiriyanna and Stecherbatsky—and both disagree with Mrs. Rhys Davids, for both attribute this idea to the Founder. Stecherbatsky, in fact, makes it the very

²⁴ Published by the author, at Thetford, Vt. 1932.

²⁵ Published by the author at Thetford, Vt. 1933.

²⁶ London: Sheldon Press. New York: Macmillan.

²⁷ London: Luzac. 1928.

²⁸ London: Kegan Paul. 1931.

center of Gotama's teachings. Into the difficult problem here raised there is plainly no time for us to go in this paper; I can merely say that for my own part I find little evidence in the Pali canon that Gotama denied the reality of the self: and that it is psychologically difficult to understand how the negative, passive, and almost nihilistic teaching attributed to him by Stecherbatsky could have started, even in India, so popular and so tremendous a movement as the Buddhist religion.

The reader will have noted that none of the books on Buddhism here reviewed were by Indians, and that only one of them was written by an Oriental. The books by Indians on Hindu thought, on the other hand, are numerous, and deal not only with ancient writings, but with contemporary developments in human philosophy. Indian thought, blossoming out of the various forms of the Vedanta, seems to be taking a new lease of life and developing along lines that promise much for the future. Most of the Indian philosophers of today are either pure Vedantists, or Vedantists with a tincture of British Neo-Hegelianism, but there are a few realists among them, and many of the Vedantins are able to think critically and independently. No such sturdy philosophical movement is to be found in either China or Japan. The great majority of the Chinese and Japanese thinkers who write and publish have cut loose from their Buddhist or Confucian roots, and are merely adopting and continuing the thought of various Western schools.²⁹ Suzuki and Kato are almost alone in their efforts to bring Buddhism and Shinto into living relations with modern thought.³⁰ But in India philosophy is a living and growing thing; and we may with some confidence look to that great land, "the Greece of Asia," for coöperation in the common attempt to find further light on the universal cosmic problems.

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BOOK REVIEWS

The Right and the Good. W. D. ROSS. Oxford: At The Clarendon Press. 1930. Pp. 173.

Some Problems in Ethics. H. W. B. JOSEPH. Oxford: At The Clarendon Press. 1931. Pp. 135.

Both these books set out to examine certain fundamental conceptions whose clarity is a prerequisite of any profitable ethical discussion.

²⁹ Note, for example, Kyoson Tsuchida's *Contemporary Thought of Japan and China*; London: Williams and Norgate. 1927. I am told a few present Japanese thinkers are developing Buddhist thought, but they write in Japanese only, and as yet their work has not been translated.

³⁰ Anesaki's work is largely expository.

sion. For unless there is some common understanding of the nature of the right and the good, such discussion becomes unintelligible. Usually, however, for the purposes of a specific enquiry a stand is dogmatically implied or explicitly postulated. Ultimately the search is unavoidable since the solution accepted determines both the attitude and method in concrete ethical investigation. *The Right and the Good* deals wholly, *Some Problems in Ethics* for the most part, with these questions. Both are the products of many years' reflection and discussion, especially concerning the nature of obligation, and the extent to which, if at all, "right" is to be analysed or understood in terms of "good." Professor H. A. Prichard in an article in *Mind* (1912) entitled "Does Moral Philosophy Rest on a Mistake?" and in his later inaugural address on "Duty and Interest," and Professor G. E. Moore in his *Principia Ethica*, developed the opposing views in spite of a certain similarity in method. Professor Moore decided that "good" is an indefinable quality and "right" is to be understood in terms of goodness of consequences. Professor Prichard found the only common character to right actions to be their rightness. The attempt to do justice to both these views lies, I think, at the bottom of the positions developed by Mr. Ross and Mr. Joseph. But it leads them along different paths: Mr. Ross to the *distinction* of action and act, morally good and right, Mr. Joseph to the *relation* of right and good in a "form of life" whose goodness implied in the judgment that a certain action is right determines the latter's rightness. Mr. Ross's book presents the appearance of a completed ethical theory, a compact system conscious of its method; Mr. Joseph's rather the appearance of a number of very fruitful suggestions carefully worked out to indicate the possible development of a comprehensive theory. I propose therefore to analyse some of the fundamental presuppositions and propositions of Mr. Ross's work, since it would be manifestly impossible to do justice to the masterly detail with which he discovers and refutes at every stage the implications of possible objections; then to state certain criticisms in the light of Mr. Joseph's views and to indicate what kind of development of Mr. Joseph's analyses seems desirable.

(1) Mr. Ross's conception of the method of ethics is fundamental to his position. "We have no more direct way of access to the facts about rightness and goodness and about what things are right or good, than by thinking about them; the moral convictions of thoughtful and well-educated people are the data of ethics just as sense-perceptions are the data of a natural science" (pp. 40-41). The only sound method of discovering the kinds of acts which are right is "that of direct reflection on what we really think" (p. 23). "The main moral convictions of the plain man seem to me to be, not

opinions which it is for philosophy to prove or disprove, but knowledge from the start; and in my own case I seem to find little difficulty in distinguishing these essential convictions from other moral convictions which I also have, which are merely fallible opinions based on an imperfect study of the workings for good or evil of certain institutions or types of action" (p. 20 note 1). Thus it is self-evident, for example, that to make a promise is to create a moral claim on us in someone else (*ibid.*), that there are duties of fidelity, reparation, justice, beneficence, etc. (p. 21), that a state of affairs in which the good are happy and the bad unhappy is better than one in which the good are unhappy and the bad happy (p. 58), that virtue, pleasure, the allocation of pleasure to the virtuous, and knowledge are intrinsically good (p. 140). Hence a proposition is considered established whenever it is shown that its denial leads one to contradict any such intuitive judgment. The advantage of maintaining that there is intuitive moral knowledge, or that some relatively material propositions concerning morals are self-evident, is obvious. It enables one in the search for methods of resolving doubt as to the right way to act, to dispense with the claim that there is a single character to all that is good, or to all that is right, or that there need be any constant relation between the two. It becomes possible to treat both right and good as ultimate qualities, and to list underived though classified, whatever is found to be right or good. The assumption of self-evident propositions therefore underlies the whole position. Its tremendous difficulties will be discussed below.

(2) A sharp distinction is drawn between the thing done or initiation of change, which is an "act" and may be called "right," but not "morally good," and the doing or initiating of change from a certain motive, which is an "action" and may be "morally good" but may not properly be spoken of as "right" or "wrong." Thus, if one man keeps a promise because it is his duty, another because he is likely to gain from it, the first action is morally good, the second action not, but the act of keeping a promise is in both cases right. It is obvious that this distinction is itself derivative from a sharp separation of the motive and the nature of the thing done, or, what really amounts to the same thing, the end and the means meant to attain it. Yet this is assumed rather than analysed in the book, and its corroboration seems to lie in (a) the view that our duty is to do certain things, not to do them from certain motives since the latter are not always in our power and it can not be a duty to do what is not in one's power; (b) the common notion that a person may do the right thing from an evil motive.

(3) As for "right," Mr. Ross decides it is an irreducible notion

(p. 12). In practice, it is always a case of recognizing the *intrinsic* rightness of a certain type of act, not depending on its consequences but on its own nature. There is no reason to believe that every act that is our duty is so for one and the same reason (p. 24), i.e., that there is a single common character to all right acts in virtue of which they are right. For that would imply that my neighbors stand to me in only one morally significant relation, for example, that of being possible beneficiaries by my action. As a matter of fact, they may stand to me in many relations, e.g., promisee or promisor, friend to friend, creditor to debtor, child to parent, and each relation is the foundation of a *prima facie* duty (p. 19). A rough outline of *prima facie* duties is attempted (p. 21). It is, of course, recognized that in any particular situation several *prima facie* duties are usually incumbent on a man. In that case whether an act is a duty proper or actual duty "depends on *all* the morally significant kinds it is an instance of" (p. 20). But how one is to decide, when there is a conflict, which *prima facie* duty is more incumbent than any other, is not clearly indicated. It is suggested that this difficulty of finding a readily applicable criterion of right conduct is shared by all theories, and that perhaps the only way is to study the particular situation in question; for "*being* one's duty is a *toti-resultant* attribute, one which belongs to an act in virtue of its whole nature and nothing less than this" (p. 28). Yet it is hinted (p. 25) that some *prima facie* duties may in themselves be more stringent than others. The conclusion in any particular case is always only probable.

(4) The various senses in which the term "good" is used are carefully distinguished. The attributive uses include the idea of success or efficiency in its application to persons, and ministering to some human interest or achieving a purpose in its application to things. The strict predicative use of the term is absolute; e.g., courage or pleasure is not a successful or useful instance of a species, nor comparatively good (i.e., rising above the average of its kind). Of these goods some are instrumental, being the means to the other, which are intrinsic goods. Ethics is concerned with wholes which are intrinsically good. But Mr. Ross finds no presumption for the view that there is one characteristic by virtue of which all things that are good, are good. He examines several such proposed grounds of goodness, rejecting in turn, after detailed consideration, Professor Perry's claim that it is "being an object of interest," and Professor Urban's that value is a specific form of objectivity. He concludes that it is facts that have ultimate value (p. 113), and that good is a quality. But it is consequential, not fundamental, in that anything possesses it only in virtue of having some other characteristic. Value is a "*genuine resultant*" (p. 122).

On inspection only four things are found to be intrinsically good, "virtue, pleasure, the allocation of pleasure to the virtuous, and knowledge (and in a less degree right opinion)" (p. 140). The chapters on Degrees of Goodness and Moral Goodness contain much that is valuable in the analysis of the intrinsic goods; they attempt to discover modes of comparison within each, and also in judging between these goods themselves. Some of the latter, it is suggested, may lie in different orders or dimensions of value so as to be incommensurable. A detailed analysis and criticism of these chapters would be desirable but is here impossible; I have therefore limited myself to those issues fundamental to the system. We may note finally that the relation of rightness and goodness follows largely from the propositions already established. Both right and good are qualities and both intrinsic. The goodness of a right act, however, is not intrinsic, but instrumental. Doing it from a good motive does have value, but the act itself can only be valuable as producing something good. It is interesting to observe that beauty in the same way is said to be an instrumental value, productive of esthetic enjoyment. Beauty itself is identified as the *power* in objects of producing this result.

Each of the above topics requires examination, especially the first two since they include the implicit assumptions of the position.

(1) The assumption of the method involves two separate claims. The first, that the function of ethics is by means of reflection, to systematize and render consistent the body of our ethical convictions, might be accepted even by those holding a far different theory of right and good. They might, for example, state the function of ethics as the discovery by reflection of what men really desire. They would add, however, reflection on experience, and instead of appealing ultimately to men's honest opinions of right and wrong, they would judge by men's honest opinions of what they really want.

The second claim, however, that some relatively material propositions concerning morals are self-evident, is open to serious objections:

(a) Anthropological evidence, showing great differences of belief as to what acts are right, renders it at least possible that some of our "knowledge" is a product of education and social influences which may come to be revised. It is to be noted that on Mr. Ross's distinction of motive from act, this evidence which can establish the act but is sometimes compelled to guess at the motive, becomes all the stronger.

(c) The whole history of self-evident propositions in the natural, theological, ethical, and even mathematical sciences renders any claim for intuitive material propositions suspect, even apart from opening the question of the nature of intuitive formal principles.

(c) A great objection is that on this view moral judgments in addition to being isolable are declared to be in need of no evidence. The whole process of their discovery becomes therefore only a psychological clarification in no sense providing evidence for the judgments in question. One feels tempted, as Mr. Joseph is, "to say that if there is no one reason for the one fact about all these various actions, that we ought to do them, there is no reason. And then the conviction that we ought to do them might be in danger of seeming irrational" (pp. 67-68).

(d) The matter may be pressed with regard to the very propositions Mr. Ross finds self-evident. That freedom is intrinsically good, or being a successful instance of a kind, seems to me on reflection to be quite as self-evident as that knowledge, virtue, or pleasure are intrinsically good. And if it be claimed that the goodness of freedom, of activity or achievement, depends on the specific kind, the same is surely true of knowledge or pleasure. That a whole in which freedom was compounded with other elements might be judged bad, is no reason why its own goodness should not be recognized. Difficulties also arise with regard to the list of kinds of acts that are right, by virtue of which *prima facie* duties are generated. For (to elaborate on Plato's illustration) it can not be right to return to a man who has meanwhile become insane, weapons whose return one has promised on a certain day. On Mr. Ross's position it would be said, I think, that the duties of justice and non-maleficence are here more stringent than that of fidelity. But the "plain man" would assert bluntly that in this case it was wrong to keep a promise. And it is difficult to see why it is any the less an instance of failing to keep a promise by being an instance of other types of acts *prima facie* duties to do which may here prevail. But if this is so it can not be self-evident that to keep a promise is right. There seem at first sight two ways out of the difficulty. One is to make a distinction analogous to that between murder and killing. But this is question-begging since murder here can only mean wrong killing, and wrong would imply some other standard. The second way is that followed by Mr. Ross in the distinction between *prima facie* duty and *actual* duty. But if the former means some circumstance in the situation which would determine my duty, were there no stronger determinant, one might as well say that it is what would be right if it were not here wrong. On the other hand, if it means what actually has weight in the decision of one's duty, I can not see how without some antecedent hypothesis or conception of morality the morally relevant relationships may be selected from the indefinite number of relationships exemplified in any particular situation. The conception of a *prima facie* duty seems valid only if

it be taken to mean "a hypothesis as to what is my duty." The outline of *prima facie* duties may therefore be interpreted as a set of hypotheses suggesting relevant factors in resolving doubt as to the right way to act in particular situations. Obviously, then, "right" can not mean the same in the particular situations as it does in the hypothesis. I suggest that the term is used with systematic ambiguity, just as "true" is when it is said that it is true that an incident occurred, that vitamins build up the body, that particles attract each other inversely as the square of their distance and directly as the product of their masses. If this is so, then some kind of a theory of levels of abstraction, or perhaps something analogous to a theory of types, is required to distinguish such propositions as "To do this here and now is right," "To keep a promise is right," "To make reparation for a wrong is right," "To bring about the best in any situation is right." At any rate there seems little ground for treating material moral propositions differently from material propositions in general, by declaring the former self-evident while recognizing the latter as at most only highly probable. All general moral propositions such as "to keep a promise is right" must therefore be interpreted as referring to a class of situations in which the relative frequency of that kind of act being performed to the right act being performed is comparatively high. Or in case of the more abstract rule, the same process is implied with respect to its logical consequences in less abstract rules. The whole treatment is precisely identical with that by which any hypothesis is established as highly probable. Finally, the greater certainty of the rule when compared to any particular instance is equally characteristic of all established hypotheses or principles—its being greater than *any* instance does not imply its independence of *all* instances.

In view of its difficulties and of this possibility of developing an alternative position which will bring moral propositions under the same logical treatment as all material propositions, it seems to me inevitable that the doctrine of such self-evident moral propositions be given up. I have not meant, however, simply to invert Mr. Ross's claim that the rightness of a particular act is determined by all the morally significant kinds it is an instance of, and to suggest that there is an independent criterion of rightness in particular situations, out of which the moral rules are merely generalized. That would be to oversimplify as the hedonist does. The analogy of law and justice may perhaps be clarifying. The courts or other arbiters aim at justice. Laws are developed to guide and check them and while they articulate or express justice they are continually modified by being administered in fresh and diverse situations.

Of course the analogy is not exact since the courts may have the partially independent ideal of *moral* justice. But a similar rôle is played in moral judgments by the ideal of a form of life which is good. General moral rules are probable judgments as to the structure of such a form of life, for some of which the evidence is overwhelming. Rules and particular right acts advance side by side, each modifying and supporting the other. Eventually very highly probable judgments may be made, but they do not stand independently of the whole developed system of principles and particular judgments as evidence.

That is why Mr. Joseph seems to me to be correct in stressing continually as he does, the form of life or wider system to which judgments of right and good refer. "We must look beyond the particular action not to its effects but to the rule of action of which it is a manifestation. This, however, is not enough. We must look to the whole form of life in some community, to which all the actions manifesting this rule would belong, and ask whether it or some other form of life is better, which would be lived by the community instead, if this rule were not helping to determine it" (p. 98). "As the problem of a particular action drives us to compare the life which would be lived through the working of its rule therein with the life animated by another, so the problem of a rule drives us on to consider the life that would be lived, if a more comprehensive form than this rule yields were at work therein, realizing itself sometimes through acts covered by the rule, and sometimes not" (pp. 102-103). The apparent immediacy of many of our moral judgments is no argument against an implicit recognition of all this. "No one owes to do anything, except in virtue of what he is, and what others are, and the situation in which he and they are placed; and if he is to be conscious of some particular obligation, he must be conscious, however inexplicitly, of all that" (p. 50). Similarly Mr. Joseph believes that obligations are not a heap and unconnected (p. 107). Both good and right are to be understood ultimately in terms of a form of life which is itself ultimately good. Rightness, where not instrumental, is a sort of goodness expressing the rules of that form of life (p. 92). Goodness itself is a kind of unitary character, and where it is not to be found in particulars called good, we must look beyond to the whole of which they are a part (p. 84).

Finally, Mr. Joseph takes care to point out (p. 71) that we may begin with a vague apprehension of the character of goodness and as our search advances we will come to understand more and more what the character is, as well as what objects possess it. This is the interplay of rules and instances which I suggested above. As a

consequence neither can be more than highly probable, nor can either be without the other for support, nor both without reference to the system they express.

(2) The distinction between an act which alone may be right, and an action which includes the motive and alone may be morally good, is challenged by Mr. Joseph on the ground that ethics is not concerned with merely physical change, and no action is, except in being done, in which case it is done with a motive (p. 43). Chapters III-V are devoted to a thorough and, I think, convincing refutation of the distinction and a reply to possible objections. The same conclusion could also be reached by an analysis of "motive," which Mr. Ross tends to take as a fundamental category. For, to have a motive for an act means merely that an introductory or concomitant part of it is thinking upon a portion of the whole act selected in view of its desirable relation to a wider context. Hence to disregard the motive is to tear a portion of the act from the whole and to treat a man's waking movements as if he were walking in his sleep. It can therefore be a duty to have a certain motive (i.e., train ourselves to reflect on certain relationships rather than others in our movements) even though we may not be able to acquire them at once, just as it may be a man's duty to stop excessive drinking though he can not become temperate all at once.

(3) I have already discussed the relation of *prima facie* duties and actual duties. But the question of a common character to all right acts deserves more attention. Mr. Ross seems to imply (p. 24) that if there is a common character to right acts there will only be one act that is right to which all others will be reducible. This indicates a confusion of formal and material. For right and good need not be genera, but as Aristotle recognized, like unity and being, they may be one *κατ' ἀναλογίαν*, in the sense of exhibiting or being part of a like structure. One of the most clarifying sections of Mr. Joseph's account is his distinction between the two senses in which the word "right" is used (one as "obligatory," the other as the character in the act which is the ground of the obligation), and his insistence that the first of these is not an adequate substitute for the failure to find a common character in the second. He rejects as that character "conducive to the greatest good" because it fails to account for the cases in which "acting to secure something is judged good or better, but what is to be secured is not" (p. 96). Hence he concludes that the rightness of right actions, where not instrumental, lies in the goodness of the system to which they belong and which they support. Such a view has in its favor that it retains some community with the non-moral conception of right as "fitting in" to an implied or given context. Further, it definitely treats good as the fundamental ethical notion.

(4) Mr. Joseph's account of goodness differs radically from Mr. Ross's. He takes it to be not a quality, but a kind of unitary character: the only account of the goodness of a poem is really the poem itself (p. 79). When such a character is not found in a subject of which goodness is asserted, it must be sought in a wider whole which that subject in part constitutes. Thus some sounds, colors, scents, emotions, are good, but only as being elements in a life or experience which is good (p. 84). Mr. Joseph thinks such a unitary character can be achieved by a community of men with diverse capacities and needs if they are conscious of a common purpose to attain a form of mutually adjusted lives and work through principles which express that form of life (p. 118). "The goodness of this common life would be the unitary goodness of the whole system; it would consist in these lives lived together." A suggestion that what are mistakenly called bad impulses are perhaps bad direction of some impulse (p. 126) furthers this view, and the book ends with the opinion that if all conflict of interests is to be resolved on principles of right, "there ought to be a good absolute, the form of which would determine what the lives of all in the common world should be" (p. 135). This is, however, a metaphysical problem, and Mr. Joseph's preference ought to be distinguished from his logical analysis of goodness. For if goodness consists in a unitary character, then the extent of the material unified is strictly irrelevant, unless extensiveness is also part of goodness. But this Mr. Joseph has not asserted. Therefore his analysis of the nature of goodness holds irrespective of the assumption he seems to imply, that a real unity can not be achieved unless it is all-inclusive. If we reject this metaphysics, as I would feel inclined to do, we may still accept his formal analysis, realizing as a result that every judgment of value has an arbitrary basis of a point of view, inasmuch as there is a choice of the material to be unified. Thus an individual might even achieve a unitary character by the relative repression of part of his makeup. If this is so, good is a formal concept, applicable only on the basis of a previous material and therefore contingent preference.

The same position can be reached starting from Mr. Ross's analysis. When he says, for example, that courage is intrinsically good, we may come to believe on reflection that this really is synoptic for courage is *a good to*, i.e., *good for*, "man" being understood, and we may take man to mean a being having certain needs, desires, capacities—in short, interests. But by interests we mean demands for what satisfies or is to one's interest, not as Mr. Ross frequently takes Professor Perry to mean, objects of approval. And goodness becomes again the unitary character in the process of living.

On the whole Mr. Ross's position is so thoroughly developed, that

many on that side of the ethical fence would be bound to end up in it if they followed their assumption to a logical conclusion. It has therefore seemed worth while to stress these assumptions, even though it has meant omitting reference to important portions of the book. Likewise, owing to a conviction that Mr. Joseph's analysis of "right" is of lasting importance, and that of good, if divorced from extraneous assumptions, only slightly less so, his discussion of freedom has not been touched.

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Before and After Socrates. FRANCIS MACDONALD CORNFORD. Cambridge: At the University Press. New York: Macmillan Co. 1932. x + 113 pp.

The author of this little book, who is now Professor of Ancient Philosophy in the University of Cambridge, has made many interesting and valuable contributions to the study of his subject, and the present volume is no exception. The four chapters were originally lectures delivered at Cambridge, and the author makes the following statement of his purpose: "It seemed clear that Socrates must be taken as the central figure in the period allotted to me, and that my business was to convey the significance of his conversion of philosophy from the study of Nature to the study of human life." He therefore "tried so to describe the early Ionian science as to show why it failed to satisfy Socrates," and has treated the systems of Plato and Aristotle as "attempts to carry into the interpretation of the world the consequences of Socrates' discovery."

Ionian science, we are told, had culminated in a complete materialism, which resolved the whole world into an "invisible game of billiards." Socrates rejected the current speculations about nature because they were dogmatic, and because they did not further man's knowledge of himself and of the right way to live. The great and revolutionary achievement of Socrates was the discovery that the true self was not the body but the soul. By the soul he meant the seat of self-knowledge and of self-rule. His mission was to substitute for the morality of conformity an ideal of spiritual manhood "rising above the commonly acknowledged bounds of human capacity."

Plato carried still further the Socratic search for the ends of living, and transformed it into a system of the world. From Pythagoras Plato learned how the Socratic conception could be extended beyond human concerns, and he proceeded to link the doctrine of final causes and of absolute forms with the perfect truths of mathematics and the perfectible immortal soul. Disbelievers in Platonism were to be offered the alternative of conversion or death,

and a few philosophers were to have supreme authority over the many unwise. Cornford very gently criticizes the aristocratic commonwealth of Plato as a "compromise" with the Socratic principles of self-knowledge and self-rule; it would seem rather to be a complete abandonment of those principles. We have heard a great deal in recent years, from Professor A. E. Taylor and the deeply regretted Professor Burnet, of the absolute truthfulness with which Plato portrayed Socrates, but there is a whole world of difference between the stimulating negative criticism which Socrates applied to the Athenians and the brutal tyranny of Plato's philosopher-king or of the nocturnal council in the Laws. If we ask ourselves why philosophers have always tended to apologize for these features of the Platonic state, the answer probably is that philosophers, even now, imagine that the evil inherent in dictatorial power is somehow exorcized if the philosopher be himself the dictator. It is perhaps permissible to point out that Plato justified his appetite for dictatorship by his faith in the utter correctness of his own dialectic, and that such faith, in Plato or in any other man, comes perilously close to being self-worship.

The Stoics (p. 83) receive undeserved credit for being the first to perceive the need of a genuine universal morality, which should not be "arrested at the boundaries of the city-state, nor yet of the nation." Long before the Stoics, Democritus had said *ψυχῆς ἀγαθῆς πατρίς ὁ κόσμος ξύμπας*, "the whole universe is the fatherland of the good soul." And this is no isolated maxim; the political views of Democritus are far more sensible and liberal than those of Plato and Aristotle.

Cornford's chapter on Aristotle is a fresh and thoughtful treatment of a familiar subject. Aristotle, says Cornford, has renounced the Platonic expedient of the divine artist; he denies "the separate existence of ideal Forms, and with the disappearance of the model, the creator too must disappear." By the concept of potentiality, Aristotle escaped the "abhorrent notion of an absolute beginning of existence." By its help, he was able to describe the observed processes of life, without "building a world of ideal reality to overarch the stream of temporal becoming." This is an ingenious and probably correct statement of what Aristotle thought he had accomplished by the invention of potentiality; the specific form, itself immortal, would travel through an unending series of individuals. On these terms, he could criticize Plato. But his criticism was unjust, for the moment that Aristotle left the field of biology, of engendered animals, to give his account of the eternal movement of the heavens, he was compelled to posit the existence of the pure immaterial form of God, the Unmoved Mover of the universe. In pure forms there is no potentiality, there is only actuality; and in them there is no

change whatever. Thus Aristotle was led, by his own conviction that the immutable is superior to the mutable, to believe in a God whose thought is wholly self-contained, and who can neither know nor act upon the universe.

In this connection Cornford utters a vigorous protest against the Aristotelian God, "whose function, in relation to the world, is the same as that of the intelligence in Anaxagoras' system." Why, he asks, did philosophers retain the word "God" as the name for a factor in their systems "that no one could possibly regard as an object of worship, far less of love"? The answer to this question is crucial to our understanding of Greek philosophy. Cornford, and a good many other students, are the victims of modern associations of thought in this respect; they feel that it was the duty of the Greeks to confine their use of the word "God" (*theos*) to something that was the object of religious worship. But the Greeks always used the word "*theos*" to refer to something that was primarily a power in this universe; any power superior to that of man was a god. Religious worship was purely a secondary consequence and a recognition of human inferiority. Aristotle used the word "*theos*" of his Unmoved Mover precisely because he believed that the Unmoved Mover was the supreme power in the universe. To him, that power was worshipful; worship does not consist merely in offering sacrifices. To the modern critic, that power appears not to be worshipful, precisely because the modern critic does not believe in that power and is not a convert to the philosophy of Aristotle. Even in the modern world, a god that is stripped of his power by the processes of thought ceases to be much of a god. When we apply this truth to the history of Greek philosophy we shall see that a radical revision of a good many current legends is necessary. Plato and Aristotle denounced most of their predecessors as atheists and materialists; and their denunciations have been naïvely repeated ever since. Their predecessors, including the Ionians, had arrived at various conclusions about the supreme power in the universe; each man naturally believed in his own conclusion, and was never tempted to be polite to the supreme gods set up by his rivals. If we are in doubt about this, we may observe the same tendency at work among modern philosophers, issuing in the same misunderstandings of history and in the same frustration. That Cornford is really aware of this is shown by his profound remark that with Aristotle "the philosophy of aspiration has become an inverted mechanism."

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Spinoza: A Life of Reason. ABRAHAM WOLFSON. New York: Modern Classics Publishers. 1932. Pp. 347.

Human memory is capricious. No one seems to have noticed the 2400th anniversary of Socrates' birth, which took place two years ago. Scanty attention was paid last year to Locke's tercentenary. But Spinoza's share in human gratitude and recollection, no doubt well deserved, was quite great, and a veritable flood of literature acknowledged the interest of our contemporaries in the thinker.

Mr. Wolfson, the author of *Spinoza*, has given us a readable and interesting biography. He evidently has not spared his efforts in gathering material to shed light on the mental development of the philosopher and on the influences which shaped or directed his mind. There is much unity in the book, for its author avoids entering controversial points, and prefers to tell the entire story as he sees it.

Mr. Wolfson is an enthusiast. He admires Spinoza and, as it seems, is anxious to give us as attractive a portrait of the thinker as can be done. However, I am afraid that Mr. Wolfson loves his Spinoza a little too much, and zealously tries to conceal even the slightest blemish in the philosopher's life and powers. I do not understand the need of representing a noble man, such as Spinoza undoubtedly was, in still nobler colors. Indeed, how can one do justice to a man by being unjust to him? Spinoza certainly does not require to be "sold" to his readers: he was a thinker great enough to stand on his own merits.

But Mr. Wolfson is jealously guarding the reputation of his man. He can not tolerate even the possibility of anybody being equal or superior to Spinoza. Descartes thus becomes a minor thinker in comparison. "We are now prepared to see," says Mr. Wolfson, "how much keener was Spinoza's philosophical insight than Descartes'. The first step of Descartes' method . . . was to doubt everything until he reached an indubitably clear and distinct idea. However, what was the first unshakably clear and distinct idea that Descartes achieved by his method? All he actually discovered was his own ego in the mental act of doubting" (p. 153). "Apart from his contributions to mathematics, and despite all his worldly interests and versatility," we read, "Descartes never reached the heights of wisdom that characterize the serene and exalted attachment to truth on the part of Spinoza. . . . He was convinced that the achievement of Truth was preferable to Fame or Expediency. This conviction and the simple but resolute manner in which he carried it out in his daily life, would suffice by itself to set Spinoza high above Descartes in the ranks of philosophers. What a tremendous moral contrast there was between the self-confident, worldly, and opportunistic French *courtier*, and the modest,

retiring and self-disciplined lens-grinder!" (pp. 156-157). Poor Descartes!

Leibniz fares no better. "The so-called Pre-Established Harmony which Leibniz had to introduce in order to keep his monads developing concordantly is a poor logical subterfuge in comparison with Spinoza's simpler dictum: 'The order and connection of things is the same as the order and connection of ideas'" (p. 287). The stupid controversy concerning Leibniz's alleged plagiarism is, as one would expect, taken seriously. "Sad to relate," exclaims Mr. Wolfson, "Spinoza was rather ill repaid for sharing his inmost and deepest metaphysical thoughts with the diplomatic philosopher. Leibniz actually used some of the concepts he gleaned from Spinoza's discussion and writings without acknowledging his debt to the less-known Jew. When he did mention Spinoza it was only in the most evasive and slighting manner" (p. 280).

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Jung, C. G.: *Modern Man in Search of a Soul*. New York: Harcourt, Brace & Co. London: Kegan Paul, Trench, Trubner & Co., Ltd. 1933. ix + 282 pp. \$3.00.

NOTES AND NEWS

We regret to announce the sudden death at his summer home at Cape May, N. J., of Woodbridge Riley, Professor of Philosophy at Vassar College. Professor Riley was born in New York City, May 20, 1869. He received the degrees from Yale University of A.B. in 1892, A.M. in 1898, and Ph.D. in 1902. He was instructor of English at New York University, 1897-1898; acting professor of philosophy, University of New Brunswick, 1902-1904; Johnston research scholar, Johns Hopkins University, 1904-1907; professor of philosophy at Vassar College since 1908.

Among his publications are the following: *The Founder of Mormonism*, 1902; *American Philosophy*, 1907; *American Thought—From Puritanism to Pragmatism*, 1915; enlarged edition, 1923; *Le Génie Américain*, 1921; *The Faith, Falsity and Failure of Christian Science* (joint author) 1925; *From Myth to Reason*, 1926; *Men and Morals*, 1929; *The Meaning of Mysticism*, 1930.

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THE JOURNAL OF PHILOSOPHY

A FREQUENCY THEORY OF PROBABILITY¹

PHILOSOPHERS have been wont to analyze such concepts as space, time, quantity, and simultaneity without attending to the actual procedures in terms of which these concepts are employed. They have, in consequence, suffered consternation or delight, according to their point of view, when on the basis of their own meanings the sciences seem like the black arts. The analysis of probable inferences similarly has suffered much because their nature has been frequently defined antecedently to a study of their use. A satisfactory approach to such an analysis would require a rather full preliminary examination of inferences usually regarded as probable, employed in various fields of research. For lack of space, however, a more dogmatic approach must be employed here. Instead of a critical survey of the employment of probable inferences, a hypothesis will be offered concerning their proper analysis, but one which it is believed can do justice to every variety of probable reasoning.

I

The theory which is here advanced can be stated most shortly in contrast to the psychological or subjective interpretations and to the materialistic or statistical interpretations of probability. The nature of the answer which each interpretation gives to well-worn illustrations, which are nevertheless only simplified forms of problems occurring in physics,² can serve as a touchstone for under-

¹ Read with some omissions at the meeting of the Eastern Division of the American Philosophical Association, Yale University, December, 1931.

² Although the conviction that any theory of physics is at most only "probable" (in some sense of the word) has been long the property of many students of logic, the conviction that "probability" is an inexpugnable scientific category has become widespread only recently. Repeated attempts to obtain the theorems of the kinetic theory from "deterministic" or classical physics have all met with failure, and the difficulties involved in the "ergodic hypothesis" of atomic behavior have necessitated a complete recasting of the theory upon statistical foundations. It is safe to say that not a single theorem of the kinetic theory can be deduced without introducing concepts involving statistical frequencies or "probabilities." See the discussion in R. C. Tolman, *Statistical Mechanics*, p. 18 ff.; p. 39 ff.; R. von Mises in *Naturwissenschaften*, Feb., 1930; also in his *Angewandte Mathematik, Band I, Wahrscheinlichkeitsrechnung*, § 16.

standing the limitation of each. Suppose we are given two strange coins each with two different faces, and we are required to state the probability of getting unlike faces upon tossing the coins.

(a) A familiar answer is that the probability is the ratio of the number of equiprobable possibilities favorable to the event and the number of all the equiprobable possibilities involved in tossing the coins. Two possibilities are said to be equally probable when our ignorance is equally distributed, that is, when we know as much or as little concerning the precise conditions tending to produce one of the alternatives as the other.³

The chief difficulty to be noticed in this psychological interpretation of probability is the unjustifiable assumption involved in the doctrine of the equal distribution of ignorance. For it is assumed that because the number of possible ways in which we can arrange two heads in tossing two coins is the same as the arrangement of two tails, the *frequency* of getting two heads is the same as that of two tails. But an examination of the *calculus* of probability shows that it does nothing more than count with *complete certainty* the number of abstract relations of a certain type. And arithmetic can not tell us which class of relations will in fact most frequently occur.

It is not difficult, however, to appreciate the motives which have led writers on probability to neglect the material or experimental basis of probable inferences. In the first place, the mathematical theory of probability is a logical system of propositions, in which the theorems are necessary consequences of the premisses. It has been an easy mistake, therefore, to confuse probable inferences with the dialectical development of premisses, in which symbolical operations may be carried on with no explicit reference to any *specific* subject-matter. Mathematicians and logicians have omitted to consider the material truth of the premisses of this logical system, and have consequently based it on the inexpugnable fact of human ignorance, in the interest of guarding the *calculus* of probability against short-sighted empirical philosophies. In the second place, since it was correctly believed that probability is not an intrinsic property of an event or proposition, and since relations were regarded as being necessarily subjective and mental, it was very natural to interpret the probability of propositions as having reference to states of mind. And even when relations were recognized as having an objective status, logicians believed objectivity for the logic of probability can be won only by basing it on immediately perceived relations between propositions, so that the validity of probable inferences becomes divorced once for all from every question concern-

³ A typical statement of this version is given by Welton, *Manual of Logic*, Vol. II, p. 166.

ing the truth of the conclusions to which they lead. As we shall see, many difficulties can be eliminated by distinguishing a hypothetical or logical as well as a material or experimental factor in probable inferences. Meanwhile, the use of the mathematical probability functions in such diverse domains as stellar astronomy, atomic and molecular physics, and genetic studies, seems like good evidence for the proposition that the probability of an occurrence is something more than a measure of our ignorance concerning it; just as the proposition that high winds cause destruction is not equivalent to the proposition that the occurrence of winds is associated in our minds with the occurrence of damage to property. And the actual changes introduced in the assumptions of mathematical statistics, in the interest of obtaining true or approximately true conclusions,⁴ indicates that in the natural sciences at any rate "truth" and "validity" are *distinctions* which it is important to make, although the terms of the distinction can not be isolated from one another.⁵

(b) As a consequence, the so-called materialistic theory has been advanced by physicists and others as an alternative interpretation. According to it the probability of an event is just the limiting value of the relative frequency with which a certain type of events occurs in a series of events. Probability and statistical frequency are identical concepts for this interpretation, and formally invalid inferences which do not deal with a series of similar events are ruled out from the province of the logic of probability.

There is little doubt, however, that we often employ the word "probable" in senses apparently not compatible with its definition in terms of relative frequency. If we wish to know what is the

⁴ R. von Mises, *Angewandte Mathematik*, Bd. I. *Wahrscheinlichkeitsrechnung*, § 13.

⁵ Although the belief dies hard that "probability" is a make-shift, a temporary and unsatisfactory substitute for competent knowledge, or that it is a concession to the weakness of finite minds, nevertheless, even the staunchest defenders of such psychological interpretations of probability give some hint that objective grounds for the state of our expectations exist. Thus, according to Hume, the "probability" of an event indicates only the vivacity of our ideas. This vivacity, however, is apparently determined by the quantity of impulse received from something non-psychological. However, Hume has nothing to say as to why the actual frequency of the turning up of a certain figure is proportional to the strength of the impulses it sends to the mind. Similarly, De Morgan maintained, after a slight flirtation with the notion of an ideal or objective probability, that by probability is meant nothing more than the degree of belief or the state of mind with respect to an assertion. Nevertheless, he argues that in spite of D'Alembert's belief that the chances are two to one in favor of a head turning up if a coin is tossed twice, D'Alembert *ought* to have believed that the chances are three to one. But whence the authority of the *ought*, if only the state of one's expectation is denoted by a statement about probabilities?

probability that Napoleon was a historical figure and not a solar myth, as Jean B. Pères wittily contended, we can not examine a series of planetary histories to discover how frequently reports concerning Napoleon have their basis in actual history. Now it may be that the word "probable" is equivocal, so that a theory of probability which is adequate for one meaning is not so for another. Thus, it may be that when we say "This theory is more 'probable' than that one," and when we say "Getting a head with a coin is just as 'probable' as getting a tail" we are employing two radically different ideas denoted by the same verbal symbol.⁶ In that case one would have to develop two different analyses of probability.

(c) Such a heroic measure is, however, not required. But in any case, if we are presented with a strange coin, the frequency with which the head will come up can not be determined antecedently by counting the number of ways in which the coin may fall. On a sound theory of probability, we must either declare that we can not estimate the probability because we lack the requisite knowledge; or we must be able to identify the coin as a member of a *class* of coins concerning which empirical knowledge is already had. Thus, we may weigh the coin, balance it, spin it on its edge, etc.; we may also examine the apparatus which will toss the coin to discover whether the impulse given to the coin favors the production of one face rather than another; and in consequence we may be in the position to assert that "probably" this coin belongs to the *class* of coins for which the "probability" of getting either face is the same.⁷

It is possible to develop a single, unequivocal interpretation of probability, if we recognize that when we say "the coin probably belongs to this class" we mean only this: the nature of the inferences or rules we employ in *this* classification is such that they lead very frequently to a correct classification.⁸ Similarly, when we say

⁶ We can find other instances of such equivocality. "Straight line" has one meaning for the pure mathematician, and another for the baseball runner; "work" means one thing for the coal miner, another for the man solving an intellectual problem, and still another for the student of physics. On the other hand, there may be present in both uses of the word "probable," in spite of apparent differences of meaning, some feature which is invariant for both uses.

⁷ "If by some edict of the Master of the Mint pennies were so loaded that one fell twice as often head up as tail up, the *a priori* probability of the head would be two-thirds, of a tail one-third." Rice, J., *Introd. to Statistical Mechanics*, p. 8.

Campbell's discussion of this point is unambiguous: "Chance is measured by the same process as is electrical resistance—as a derived magnitude. Chances are important for physics in so far as they represent relations between frequencies." *Philosophical Magazine*, Vol. 44 (1922), p. 69.

⁸ Cf. J. von Kries, *Wahrscheinlichkeitsrechnung*, pp. 28 ff.

"the probability of getting either face is the same," we mean only this: coins identifiable by certain marks (e.g., position of center of gravity) when tossed in specified ways do fall approximately as frequently on one side as on the other. It can be shown that these *apparently* different meanings of probability are in fact identical.

We may see this clearly if we determine the frequency with which the values of the propositional function "This coin will come up heads on the next toss" are true, where "next" has the rôle of a variable.⁹ The truth-frequency of the values of the propositional function, and the frequency of getting a head will be the same. Let every value of the function be inferred from some other proposition—stating the position of the center of gravity of the coin, for example. Hence, when we say "It is *probable* that this coin will fall heads with a probability of one-half" this may be interpreted to mean that the type of inference we employ in classifying coins is of such a nature that they lead to true results with a definite (but perhaps unknown) relative frequency. And when we say "This coin will fall heads with a probability of one-half" this will mean that the type of inferences *from* propositions asserting the position of the center of gravity *to* the proposition that heads will turn up, is correct half the time. Thus we see that "probability" denotes the *relative frequency* of the effectiveness of a certain type of inference.

We are thus driven to recognize both a logical and a factual aspect in probable inferences. We may state more formally the nature of probable reasoning in terms of C. S. Peirce's doctrine of "leading principles."

A leading principle can be defined as a proposition formulating a class of inferences. It denotes a relation whose domain is a class of propositions p and whose converse domain is a class of propositions q such that q is inferable from p in virtue of this principle. Thus from the proposition "This penny has its geometric center coincident with its center of mass" we may infer "This penny will fall heads uppermost" in virtue of the principle "If penny x has physical symmetry then penny x will fall heads uppermost on the next toss." On *any one* application of the principle the conclusion may be false although the premisses are true. But the *inferential value* of a leading principle does depend upon the frequency with which it leads *as a matter of fact* to true conclusions from true premisses.

We may now define the phrase "the probability that a proposition is true." Let A be any propositional function whose values are

⁹ I.e., consider the frequency with which the values of the propositional function, "This coin falls heads up on toss x " are true.

in the domain of the leading principle, and let B be any propositional function whose values are in the converse domain inferred from A . Let $n(AB)$ represent the frequency with which the values of both A and B are true, while $n(A)$ is the frequency that the values of A are true.¹⁰ And let the field of propositions to which a leading principle is applicable conform to the following: (1) *Condition of Convergence*. In a series of applications of the leading principle, the ratio $n(AB)$ to $n(A)$ approaches some limiting value as $n(A)$ increases. (2) *Condition of Randomness*. Select from the domain any subclass of propositions. Then for every subclass the ratio $n'(AB)$ to $n'(A)$ approaches the same limit as does the similar ratio in the original class. If both conditions are satisfied, we define the "probability that a proposition is true," inferred in virtue of a leading principle from another proposition, as the limiting value of the relative frequency with which the principle leads to true conclusions from premisses which are true.¹¹

Clearly, then, the phrase "the probability that heads will come up" has meaning only in terms of the *type* of argument employed to infer the proposition "heads will come up." If that type of inference deserves our confidence, it is because in fact it does lead in a certain proportion of cases to true conclusion from true premisses. But the leading principles of formal logic (e.g., principle of contraposition) must be differentiated from the principles we have been discussing; for the invariability with which such formal principles yield true conclusions from true premisses is not taken into account in our discussion of probable arguments.¹² Furthermore, probability considerations are meaningful only for arguments for which a limiting value, as defined above, exists or is suspected to exist. If, knowing nothing about a country side in which I am lost, I say that it is "probable" I will reach my destination by

¹⁰ An algorithm for dealing numerically with propositional functions was developed by Couturat, in the *Rev. de Mét. et Mor.*, Vol. 24 (1917); and by Reichenbach, *Mathematische Zeitschrift*, Band 34 (1932).

¹¹ The development of the entire mathematical theory of probability on the hypothesis of a class satisfying both of these conditions is exhibited in full detail in R. von Mises, *Angewandte Mathematik*, Band I (1931); a more popular treatment is given in his *Wahrscheinlichkeit, Statistik, und Wahrheit*. It is possible to elaborate, up to a certain point, a frequency theory without introducing the Condition of Randomness, and this has been done by Reichenbach in the paper cited. Many of the issues raised by the Condition of Randomness can not be discussed here for lack of space and because of their highly technical nature.

It should be noticed in passing that on the view of probability here proposed, it is not essential that the premisses in any probable argument must be known to be true. They may be probable on the evidence of some previous inference from other sets of premisses.

¹² Cf. Nicod, J., *Problème Logique de l'Induction*, p. 20.

taking the left road at a crossing, my statement has no significance beyond expressing a desire or hope. It is, of course, not always easy to assign a numerical value to an argument, either because it may be seldom employed, so that a limiting value for it can not be ascertained; or because, although often used, the required statistical information is not available; or because the argument may be so complex and contain so many subsidiary leading principles that an analysis in terms of truth frequencies has not been carried through. Nevertheless, we often evaluate the "strength" of an argument without being in possession of extensive statistical data or without being able to assign a numerical value to it. Thus we often say that it is less probable that what my friend just said is true because he sneezed after saying it, than that it is true because he gave me his "word of honor." We may ask, indeed, with Mill, why a few instances of an argument are sufficient in some cases for establishing its "strength" while in other cases an indefinite number of instances help very little to establish the probability value of another argument. And we can answer, as Mill can be answered, that at the stage of human investigation where a few instances are sufficient to lend force to an argument, the *constancy* of the association of certain propositions has the support of the overwhelmingly large experience of the race.

On the interpretation of probability here presented every probable argument has, *theoretically*, a numerical value. The single but essential difference between the "truth-frequency" probability theory and "material" frequency theories such as that of Venn, is that in the former the "event" of the material theory is an inference made from one class of propositions to another; and the "favorable event" of the material theory is a case of the conclusion of such an inference being a true proposition. Since, therefore, the "value" of a probability, whenever it is obtainable, is a relative frequency, the technique developed for compounding relative numbers can be applied to evaluating the probabilities of complex arguments. Addition and multiplication of probabilities can be readily defined if we make use of some well-known theorems concerning limits. If P is a leading principle, p , the premisses, and q_1 and q_2 two mutually exclusive subclasses of the converse domain of P ; and if P applied to p leads to q_1 with the relative frequency f_1 (equal to the limit of $n(p, q_1)$ over $n(p)$) and to q_2 with the relative frequency f_2 , then the probability that either q_1 or q_2 is true if p is, is given by $f_1 + f_2$. For example, if we know that a die is symmetrically built and that under certain conditions of throwing the values of the propositional function "the two-spot comes up" and "the three-spot comes up" are true each one-sixth of the time, then the values of the proposi-

tional function "either a two-spot or three-spot will come up" will be true one-third of the time. Whether addition of probabilities so defined satisfy the usual demands that addition conform to commutative and associative laws, must be determined, in this case as in all others, by experiment.¹³

Suppose, next, we know that a leading principle P will enable us to infer the truth of propositions falling into the mutually exclusive subclasses $(q_1, q_2, \dots q_{2n})$ of the converse domain of P with probabilities $f_1, f_2, \dots f_{2n}$. We wish to know, having informed ourselves that in virtue of special circumstances propositions in classes $(q_1, q_3, q_5, \dots q_{2n-1})$ could not be true, what is the probability of propositions in q_2 being true on the hypothesis that p is. An easy calculation shows that the probability of q_2 is then given by f_2' which is equal to f_2 divided by the sum $f_2 + f_4 + \dots + f_{2n}$. The well-known theorem of Bayes can be shown to be a generalization of a problem of this nature.

Finally, we define "independent" arguments and multiplication. Two leading principles P_1 and P_2 will be said to be independent of one another if in selecting a subclass from p_1 (the domain of P_1) on the basis of some correlation with *any* subclass of p_2 (the domain of P_2), the relative truth-frequency ratio of P_1 when applied to the first subclass remains unchanged. If the probability of q_1 with respect to p_1 (using P_1) is f_1 , and that of q_2 with respect to p_2 (using P_2) is f_2 , then the probability that both q_1 and q_2 are true on the joint hypothesis p_1 and p_2 using principles P_1 and P_2 , is $f_1 \times f_2$. Thus if the probability of the proposition "a head will come up on this coin" is one-half, and of the proposition "a three-spot will come up on this die" is one-sixth, the probability that "both a head and a three-spot will come up" is one twelfth.¹⁴

Thus the *calculus* of probability is concerned, given the "truth-frequencies" of certain leading principles, to discover the "truth-frequencies" of other leading principles involved in the first set by combining the principles of the first set in various ways. All kinds of leading principles are capable of being manipulated by the calculus, as far as their "truth-frequency" values are concerned. But since most leading principles, as a matter of circumstance, have not an ascertained numerical probability, it is profitless formalism to apply the operations of addition and multiplication to their theoretically possible frequency coefficients.

In sum, then, on the theory of probability here proposed, probability is a *relation* between *propositions*, not between a proposition

¹³ Campbell, N. R., *Measurement and Calculation*, Chap. 2.

¹⁴ This entire matter is very technical, but has been worked out in detail, for other purposes, by von Mises, *op. cit.*, § 3.

and the state of mind of some inquirer. It is a relation whose analysis shows that the relative truth-frequencies of classes of propositions between which it holds is part of its meaning. It follows, therefore, that a proposition is correctly judged to have a probability only in so far as it is referred to some *class* of propositions, and that a proposition will be judged to have different degrees of probability according as it is referred to one such class rather than another. Questions of probability, like questions of relevance, always involve material or factual, in addition to purely logical, considerations.¹⁵

II

It is time, however, to indicate shortly the advantages the truth-frequency theory of probability has over others; and to meet, or try to meet, some important objections.

(1) Unlike the theories which regard probability as a function of our ignorance, and which make a complete mess in their interpretation of "numerical probability," the theory here advanced is not based on the *psychology* of what or how people think and believe. An objective ground is supplied for asserting one conclusion as more "correct" than another, on the basis of evidence considered. A proposition is probable, not because we may have an impulse to believe it, but because as a matter of fact the leading principle involved does lead to true conclusions a certain proportion of times.

(2) The claim to be free from irrelevant psychology is made by such theories as those of Keynes and Venn as well. For Keynes, however, "probability" is a logical relation between two propositions, which is altogether *sui generis* and irreducible to classes of inferences between two sets of propositions. On his theory we must possess an "intuition" of the exact probable relation between two propositions.¹⁶ Now, unfortunately, no one has been able to give an account of this intuitive faculty or even to employ it for estimating the probabilities of propositions. Moreover, it is an admitted character of probable reasoning that a false conclusion drawn on the basis of given evidence does not invalidate the claim that that conclusion is nevertheless probable on the evidence.¹⁷ But since on Keynes' view the probable relation is obtained in a unique intuition, such an intuition (even if we grant that it does exist)

¹⁵ Relevance may be defined in terms of probability. If p is a proposition and h the evidence marshalled in its favor, if for the purposes of a given inquiry degrees of probability less than some assigned value α may be neglected, and if the degree of probability f of p on evidence h is less than α , then h is irrelevant to p in that inquiry; it is relevant in that inquiry if f is equal to or greater than α .

¹⁶ *Treatise on Probability*, pp. 6 ff., 13, 16.

¹⁷ *Ibid.*, p. 7.

can not be checked or verified by any *subsequent* experience, since for Keynes the *frequency* with which a probable argument leads us astray or not has nothing to do with the matter.¹⁸ On Keynes' theory *we can never be wrong*, since the validity of the intuition is independent of the success of men's trials. Keynes can always claim that "on the evidence" his intuition of the probable relation is sound, and that if he alters his judgment as to the probability of a proposition it is because new evidence is introduced.¹⁹ Now if we invoke the usual principles of scientific method to judge Keynes we must indeed be sceptical of a theory which requires that we can not possibly be found in error. And no other reason is brought in support of such a curious state of affairs but the claim to an infallible intuition. There is therefore a *prima facie* case against Keynes' theory, which is so frankly built on shaky intuitive foundations and so completely out of contact with the usual tentative character of scientific inquiry.²⁰

Keynes may indeed declare that he is interested in the formal connections between propositions whenever (and subsequent to) the probability relations between them have already been determined. Perhaps a more serious charge, therefore, against Keynes' theory is the metaphysics and epistemology to which he is committed as a consequence of his analysis of the probability of induction. According to him and to Broad it turns out that any generalization

¹⁸ "The validity of the inductive method does *not* depend on the success of its predictions. Its repeated failure in the past may, of course, supply us with new evidence, the inclusion of which will modify the force of subsequent inductions. But the force of the old induction *relative to the old evidence* is untouched. The evidence with which our experience has supplied us in the past may have proved misleading, but this is entirely irrelevant to the question of what conclusion we ought reasonably to have drawn from the evidence then before us. The validity and reasonable nature of inductive generalization is, therefore, a question of logic and not of material laws." P. 221 (*italics in text*); cf. also p. 243.

¹⁹ We must distinguish between "intuition" as the intellectual function which is supposed to *guarantee* the truth of its object, and "intuition" which consists in applying a principle or recognizing a principle in an instance of it. Thus, the probability of getting heads with a coin is one-half, because we have made repeated observations on coins of a certain class. If a coin is presented to us, we "intuit" the "fact" that *this* is one of a class of objects having the property of falling heads as often as tails. But this intuition requires *subsequent* verification; prior to the verification the intuition delivers only a hypothesis.

²⁰ Keynes himself sometimes recognizes a form of the frequency theory. He clearly recognizes (p. 54) that the principle of indifference can be applied to the problem of drawing colored balls from an urn only *subsequently* to a judgment that the color as such is irrelevant. The point at issue is, of course, discussed with much clarity by Mach in his treatment of the principle of the lever, *Science of Mechanics*, p. 9.

we make on the ground of a set of observations is not "strengthened" by repeated observations verifying such a generalization, but owes its "strength" to a finite antecedent probability in favor of the generalization drawn from some other source. Such finite antecedent probability for a theory (antecedent to its verification) comes to it from considerations of analogy to other theories. But such considerations drawn from analogy can not be pursued indefinitely, and in some cases therefore we may feel justified in assuming directly that a theory is antecedently probable.

On Keynes' view, therefore, we must ultimately judge that theories considered have a finite probability *antecedent* to verification. As he says "We depend upon the initial presumption that if a proposition appears to us to be true, this is by itself, in the absence of opposing evidence, *some reason* for its *being* as well as appearing true."²¹ In addition, we must take as a premiss for all induction the principle of limitation of independent variety, according to which the ultimate constituents into which the facts of the universe are analyzable, are finite in number. The reason why such a premiss is demanded, is that since every generalization must have an antecedent finite probability the assumption that there are a finite number of exhaustive alternatives into which the constituents of every generalization can fall, will guarantee the antecedent probability.²² Thus, on Keynes' theory, we must be able to make a true statement about the constitution of all nature before we can make a true statement about the structure of a part of nature. Such a view is not far removed from the old type of rationalism according to which *a priori* material propositions can be known. Is the principle of limitation of variety a self-evident proposition or only probable? No one dares call it true by self-evidence. But if it is only probable, we ask on what evidence? On the evidence of the inductive process? Logical disaster is inevitable then. Or is the principle a "postulate" which is plausible because it works? But in that case, some form of a frequency theory of probability must be adopted, and the notion of an antecedent probability for a theory must be given up. As Peirce observed, we are not concerned with discovering the probability that facts will fit a given theory; since to be so concerned implies that we are interested in all possible worlds and in the frequency with which this actual world illustrates one of the possible ones—a clear absurdity. "There is no prob-

²¹ *Op. cit.*, p. 239 (italics in text). That on this theory all observation and experiment has no value for inferring anything about the constitution of nature, and that the conclusions of an inquiry turn out to depend on the antecedent probability of the conclusions, stands out clearly in Broad's "Presidential Address," *Arist. Soc. Proceedings*, Vol. 28.

²² *Op. cit.*, Chap. 22.

ability before all reality," wrote Bradley. "There is none which does not stand on a basis of fact assumed or actual, and which is not a further development of that basis."

(3) The "truth-frequency" theory of probability can take over the entire mathematical apparatus and method of the "material" frequency theories such as those of Venn and von Mises, without committing itself to the narrow field of application of either. It is certainly legitimate to pursue the study of probability theory on the assumption that its subject-matter is a series of future events. By so doing, however, the theory cramps its range of application and throws no light on such presumable "probable" questions as are involved in judging past events. Logically the investigations of the past and of the future are in the same boat; and if a theory can be developed to explore the serial character of events in the future that theory ought also be applicable to the past as well.

Every event, regarded as a "concretion in existence," is unique and inexhaustibly rich in its attributes and connections. An event so regarded has an aspect of finality which is altogether incommunicable, and which is consequently not subject to discursive exploration. This immediacy that past events possessed when they were present is irrecoverable by inquiry. But every inquiry is addressed not to that which is unique, but to the recurrent characters of events also possessing aspects of uniqueness.

Consequently, when we inquire whether Napoleon "really" lived, we ask whether certain repeatable features of such a presumptive being can be inferred to have "really existed" from certain evidence. The inference, however, involves the use of some leading principle, leading from the evidence to the conclusion; its "truth-frequency" may have a limiting value and hence a probability—if it does not, the argument is worthless. If we knew the truth-value of every proposition in the field of the leading principle, there would be no sense in employing it; the practical significance of leading principles lies in our knowing their associated probability value and in knowing the truth value of some propositions in its domain. In such cases the objects of historical study, like the objects of physics, can be explored in terms of probable inference.

The probability of a proposition about something in the past, just as that of a proposition about the future, thus is only the evaluation of the evidence for it on the basis of a definite method. The proposition that there was an eclipse of the sun in 585 B.C. is either true or false. Since there is only one proposition asserting such an occurrence and only one such event, on the material frequency theory we could not evaluate the probability of its truth, since a random series of some kind is not present. But such a series is in-

volved in the "truth-frequency" coefficient of the leading principle employed in inferring the proposition. Similarly, the German historian Giesebrecht claimed that certain extant chronicles of the eleventh century obtained their information from a common source no longer extant. He constructed the hypothetical missing document from its supposed later derivatives, employing a complicated set of leading principles in the process. Twenty-six years later the missing chronicle was discovered which confirmed in all essentials the reconstruction.²³ The leading principles employed in this case were confirmed. If they and other principles could be repeatedly confirmed in this or similar ways, so that a limiting value were established for them, the logic of historical studies could be placed upon a mathematical basis.²⁴

On the frequency theory of probability here developed, the probability that a theory is true is capable theoretically of the same sort of determination in terms of the frequencies associated with a leading principle, as is the probability of getting heads with a coin. The arguments leading to the discovery of the theory, the nature of the verifications to which it is submitted, are special instances of comprehensive leading principles which have had a certain frequency of successes. Let us consider an example.

Observation of magnetized bars of iron, needles, nails, etc., shows that magnets have two unlike poles such that unlike poles attract and like poles repel one another. We discover, however, that metals are not all equally magnetizable, and that the best metal magnets lose their magnetic properties with lapse of time. We may explain these facts on the theory that all metal substances are composed of small particles, each a *permanent* magnet with two poles, and each capable of rotating around a fixed center. It is shown that in one arrangement of these particles with respect to one another, the opposite poles neutralize each other completely, so that the *entire* bar shows no magnetic properties; in another arrangement, only *some* of these particles neutralize one another, so that the *entire* bar does show magnetic properties. The changes in the relative position of these small permanent magnets, and the ease of their rotation around their fixed centers, will then explain why a metal bar acquires or loses magnetic properties.

Now, quite clearly the hypothesis of the theory can not be directly verified. It can be verified only through the verification of

²³ Johnson, A., *The Historian and Historical Evidence*, p. 17.

²⁴ Locke's discussion of testimony, and his conclusion that "the farther off it is from the original truth, the less force and proof it has" (*op. cit.*, Book IV, Chap. 16), wins its persuasiveness because of the implicit reference to the frequency with which the type of arguments employed in arguing from such testimonies do or do not lead us astray.

its consequences. In what sense, however, can the theory be said to be probable on the evidence of its verifying instances? The usual statement is that while the theory offers an explanation for the observable phenomena, *other* theories may also explain the phenomena of magnetism; moreover, some of the logical consequences of the theory may be in disagreement with observation. But can this explanation of what is meant by saying the theory is probable be stated in terms of the truth-frequency theory?

At first sight it might seem as if this could not be done. For if the propositions asserting that metal bars exhibit magnetic properties under specified conditions are the premisses, and the theory is the inferred conclusion, what is one to make of the interpretation that the probability of the theory is the relative truth-frequency with which the theory is true when the premisses are true, if the theory can never be shown to be true? But such a view is not as nonsensical as it appears, if it is remembered that the theory has logical consequences which *may* be directly verified; that the physical meaning of the theory consists in all the possible verifiable consequences which it has; and that therefore the probability of the theory depends on the relative frequency with which its investigation (carried on in accordance with certain standard methods) leads to the empirical corroboration of samplings made from the necessary consequences of the hypothesis. In the present instance, for example, the theory has as one consequence among others, that hammering or heating a magnet will make it lose its magnetic properties. The evidence *for* the theory is obtained, therefore, by taking as premisses propositions directly verifiable, *via* the theory which is not directly verifiable. The leading principle involved is the specific method and principles of evidence employed in this inquiry; and the frequency ratio associated with that method measures the probability that the theory is true.

(4) On some views of probability, such as those of Professor Ducasse, probability is the measure of discrepancy between a given set of conditions and those conditions which are necessary for the "production" of a certain event.²⁵ When we say that it is more probable that a certain man will live to be fifty than one hundred, we must apparently interpret this to mean that the conditions which prevail in the case of the given man are "nearer" to the conditions necessary to live until he is fifty than to the conditions necessary to live until he is one hundred.

But why does it happen, we may ask, that in fact men live more often until fifty than one hundred? Why in the case of the given man, whether he lives to be a hundred or dies at fifty, is the "near-

²⁵ *Proceedings of the Sixth International Congress of Philosophy*, p. 347.

ness" of his given initial condition to the ideal condition for a life of a certain length, any index to the duration of his life? If the necessary conditions for living a life of a certain length are not satisfied, then it is impossible at that time that the man *should* live for such a duration. Those supplementary conditions, required to make the actual set of conditions into a necessary set for the occurrence of such a life-span, would have to be added. In this sense, as Professor Ducasse recognizes, whatever is not physically actual is impossible *then*. Nevertheless, when we say that it will probably rain to-night we do not mean *only* this: that all the factors necessary to produce rain are lacking. We mean, for example, that the readings on the barometer, the wind gauge, etc., are more or less reliable signs for the actual occurrence of rain in the near future. We may suppose, indeed, that possibilities have some kind of efficacy tending to bring themselves into existence; and that, consequently, the necessary conditions for an event which are less completely actualized in one case than in another have "more to do" in the first case than in the second. But even if we do make such a supposition, it must be on the basis of some (frequency) theory connecting the "distance" of actual conditions from ideal conditions for obtaining an event with the frequency with which those ideal conditions are realized.

(5) We turn to the difficulties which are laid at the door of all frequency theories.

(a) Since probability has been defined as a limiting value of the "truth-frequency" of applications of a leading principle, but since every statistical survey we can ever undertake must deal with classes having a finite number of terms, it is clearly impossible, one objection runs, to discover the probability of an argument. Such a theory of probability, it is said, can not do justice to any actual argument in probabilities.

This difficulty, although serious, is not confined to the frequency theory of probability. It is one which every science must face when it interprets a discrete set of observations in terms of a theory applicable strictly only to a continuous and therefore infinite series of possible observations. From a relatively few observations on the positions of the planet Mars we conclude that its path is an ellipse, and we calculate its plane and axes. Our conclusion can not be justified on the ground that an ellipse is the *only* curve to which the discrete positions can be fitted. It is justified partly because future observations do in fact verify the inference that the positions of the planet converge to the elliptic path; and partly because the astronomical theory developed on the supposition that the path is an ellipse, is sensibly verified for other planets, as well as for terrestrial

phenomena such as capillarity, the fall of free bodies, the tides, etc.

Similarly, on the basis of studies on births, and of reports on the tossing of coins, we assume that the probability of a male child being born or of a head turning up is, in each case, one-half. In neither case is the *limiting* value of the frequencies actually observed, even though the actual values may not differ very much from what are said to be the limiting values. Nevertheless, on the *assumption* that one-half is the value of the limit, future series of observations can be predicted and correlated not only for births and coins, but for certain gas phenomena, etc. Moreover, the method which is employed in extrapolating the value of the limit is often such that the hypothesis that it is one-half, for example, can be progressively modified and corrected in the course of using this hypothesis. It is therefore no serious objection to frequency theories that probability statements are often made, as in playing cards, although no statistics are either at hand or obtainable. Every book on statistical mechanics recognizes that the numerical value of the frequency with which a given molecule occupies the various "phase-cells" (i.e., takes on values of velocities and positions) is postulated not on direct experimental grounds (since we have no direct experimental evidence concerning molecules), but on the basis of the empirically observable frequencies to which the *consequences* of such a postulation lead.²⁶ "Chance in physics is usually a theoretical and not an experimental conception; but it may be suggested that anyone who proposed to attribute to the chance of a given deflection of an α -ray in passing through a given film any value other than that determined by frequency, could convince us of nothing but his ignorance of physics."²⁷

If, therefore, the objection here considered were valid against the frequency theory of probability, a similar objection would be fatal to all science. It is the self-corrective nature of scientific procedure which removes the sting from the objection. Nor must it be forgotten that we often feel secure in positing a limiting numerical value for a leading principle, even when only a small number of applications have been made, because the conditions present in the small number of applications can be subsumed under a larger class of better known conditions. Thus we may toss a strange coin only a few times in order to be able to say that the probability of getting heads is one-half. Such an inference to the limiting value of the frequency of heads is fortified if we can subsume *this* coin in the class of coins known to be "fair"; for our experience with "fair" coins may be more extensive than our experience with *this* coin.

²⁶ Cf. Rice, *op. cit.*, p. 35.

²⁷ Campbell, *Philosophical Mag.*, Vol. 44, p. 69.

These considerations, intended to blunt the point of the objections against the condition of convergence for probability, are equally relevant to similar objections against the condition of randomness.

(b) However, a more serious objection to the frequency theory must be considered. If a limit, in the strict mathematical sense, exists for a series of terms, then if we choose any preassigned small number, we can find a certain term in the series such that the difference between any term subsequent to this certain term and the limit is always less than the preassigned number. This, however, has as consequence that after this certain term is reached, the event *must* occur just so often in order that the series should have the limit it is said to have. But if the series is also a random one, in the sense defined, it *can not* be true that the event *must* occur just so often at any portion of the series.²⁸ Thus, let the probability of getting heads with a coin be one-half, and let the preassigned number be one-fourth. The point of the objection is that no matter how many times the coin is tossed (say a billion times) it is never certain, in view of the randomness of heads falling, that the difference between the ratio of the number of heads over the number of tosses and one-half will be less than one-fourth; but if this ratio converges to one-half, this difference *should* remain smaller than one-fourth after a certain number of throws. The frequency theory is therefore accused of being self-contradictory.

Nevertheless, this apparently overwhelming objection can be successfully challenged by the "truth-frequency" theory here developed. For the objection loses its force when we recall that probability is defined for a *series* of terms (read "applications of leading principle") and not for a single term of the series. If a coin is tossed ten times, the frequency theory does *not* say that five heads must come up if the probability of getting a head is one-half. The theory says that in a *series* of *sets* of ten tosses each, sets containing five heads will be more frequent than any others. This is a probability of the "first order." But the theory also states the frequency with which *discrepancies* from this probability (of sets with five heads) will be less than a certain number. This is a probability of the "second order." To obtain this second order probability we must examine a series of series of sets. In the same way we could obtain a probability of the third order concerning the frequency with which deviations from the second order probability will occur, and so on.

In other words, the frequency theory is consistent with its fundamental idea when it asserts that a proposition asserting the prob-

²⁸ Fry, T. C., *Probability and its Engineering Uses*, p. 89.

ability of an argument is itself probable, i.e., is inferred from other propositions on the basis of some leading principle, and so forth; theoretically, an endless series of numbers is required to indicate the "probability" of a proposition, although in practice we content ourselves generally with the first and second order probabilities. This practice is justified because the higher order probabilities do not differ very much from unity, and can be neglected for most purposes; and it is illustrated in the use of distribution functions and standard deviation functions in statistical analyses. Nor is the theoretical requirement of an infinite set of numbers to do justice to the character of the evidence for a proposition, a *reductio ad absurdum* of the position, if the higher order probabilities do in fact rapidly converge to unity. For it is well known that an infinite product of proper fractions is not necessarily zero.²⁹

The answer to the objection here considered may be put in another way. Is it logically absurd to suppose that propositions about the objective grounds of probability are themselves only probable? If not, then it may be that the numerical determination of the probable value of an argument is only approximate. And the method employed in obtaining these approximations may itself become the subject-matter for a new inquiry, involving other arguments once more perhaps only probable.³⁰ The only alternative treatment of probability with which I am familiar, which attempts to circumvent the force of this objection, commits us to an "intuition" of probability relations. Thus Professor Whitehead recognizes that the determination of a statistical frequency is itself probable. But he thinks that we here appeal to a wider meaning of probability than that of relative frequency, and that this meaning can not be interpreted without "make-believe" as a relative frequency. Unfortunately, the explanation he does offer for this apparent hierarchy of probabilities leads him to accept a principle of indifference and the intuition of "cases of equal probability." "A die is a given fact; and its faces do not differ, *qua* faces, in any circumstance relative to their fall with one face upwards or another down. Also beyond this fact, there is ignorance. Thus we are again driven to ultimate fact: there must be an ultimate species, and the specific character must be irrelevant to the 'favorableness' or 'unfavorableness' of the members of the species in their capacity of cases. All this must be given in direct knowledge without any ap-

²⁹ See the similar discussion by Peirce, *Chance, Love and Logic*, p. 90, and Reichenbach in *Erkenntnis*, Band I, pp. 166-173. The rejection of the notion of a hierarchy of probabilities by Dubs, *Rational Induction* is based on the mistake that every infinite product whose terms are all proper fractions approaches zero as a limit, *cf.* p. 434.

³⁰ *Cf.* von Kries, *op. cit.*, pp. 60, 81.

peal to probability.”³¹ But which is the greater “make-believe”—the belief in indubitable, immediate knowledge, or the belief that all our methods of inquiry, though often secure, are always at the mercy of the precarious world and are not certainly known to be applicable to it successfully? The frequency theory accepts the second alternative, in the light of the history of claims to immediate, infallible knowledge, as the less mystical.

IV

If it is true that the methods employed in exploring a subject-matter condition what is revealed in that exploration, it is also true that the traits which a subject-matter possesses condition the use and efficacy of the methods employed. A room thermometer will tell us nothing about the air pressure in a room, and comparatively little about the distribution of energy in the spectrum of the sun. A mathematical equipment not greater than that of Euclid can express only a few of the invariant characters which our world possesses. But if a bolometer is a more adequate physical instrument for recording variations in energy distribution, and if the tensor calculus is a more sensitive intellectual tool for revealing a relational structure, the grounds for this greater adequacy and sensitivity do not differ in kind from the grounds for the shortcomings of other instruments. It is a well supported conclusion of the realism of the artisan that the character of the method used is congruous with the traits of the subject-matter explored. If a bolometer can be used effectively, it is because the spectrum is the locus for delicately shaded energy variations. If mathematics can be employed successfully, it is because the world *does* possess a mathematical character.

It is a similar insistence upon the connection between formal principles of inference, and the existential traits which are explored with their help, that makes the philosophy of Peirce so distinctive. Consequently, the “truth-frequency” theory of probability can not be only a logical theory. If its interpretation of the nature of probability is sound, the effectiveness of probable arguments should be grounded in certain generic traits of existence. The theory has metaphysical bearings as well as a logical function. It points to the existence of a certain type of natural structure and contributes toward the understanding of the objective nature of universals.

The effectiveness of probable arguments in exploring what exists seems to be based therefore upon the existence of certain classes of events between which special relations hold. There are indeed char-

³¹ *Process and Reality*, p. 307.

acters in the flux which are so connected that when one instance of a class of characters is present, another instance from a different class of characters is invariably present at the same time or subsequently. Probability arguments seem on the other hand to refer to classes such that when an instance of one class of characters is present, an instance of *any one* of several mutually exclusive classes of characters is also present. But what is distinctive in the relation of the first class to the other classes, is this: *which* one of the several classes that is represented by an instance is no longer contingent upon the instance of the first class. There seem to be not only "one-one" relations between classes, but "one-many" relations as well. This does not mean, however, that *none* of the "one-many" correlations can ever be exhibited as complicated modes of "one-one" connections between subclasses of the first set of classes. It does mean that *at any rate* such "one-many" correlated classes have a secure place in the order of nature, whatever be the ultimate fate of our knowledge concerning them; and it does mean that in some cases of such "one-many" correlated classes the evidence for believing them to be irreducible is as good as is the evidence for the existence of "one-one" related classes. There are not only the rigid connections in nature formulated by logic and much of physics; there are looser ties as well. Contingency is as little an anthropomorphic category as is strict determinism.

It follows that many "demonstrations" of universal causality do not survive critical examination. One such proof claims evidence for universal causality because the sequence of events we do observe is in conformity with what should occur if "causes" were operative, but altogether "improbable" if the conjunction of events were casual. Thus the question is asked as to the probability that fire would go out when water was thrown upon it, in a world in which there is no causal enforcement. And the proof concludes, on the assumption that the probability for such a conjunction is one-half, that the probability of n consecutive occurrences of the event "water-thrown-on-fire-fire-going-out" would be one-half raised to the n th power. Hence the general conclusion is that the event is causal, since the probability that such oft repeated events should be casual is very small.³²

Unfortunately, the entire proof is based upon the theory that what seems "equally likely" to us will occur as often as not. The proof *assumes* further that the "probability" of "water-quenching-fire" on one occasion, is *independent* of the "probability" of that phenomenon on every occasion. Everything depends on these points. But we really can not evaluate a "probability" for the actual world

³² Montague, *Ways of Knowing*, pp. 203 ff.

by first transplanting ourselves to the realm of "all possible worlds" to see "how often" the actual world does conform to one of the possible ones. The conformity or lack of conformity of nature to the causal model can not be discussed until the *empirical* frequencies of certain events are ascertained; the event "water-quenching-fire" has no antecedent probability or improbability.

Finally, some attempts to state the presuppositions for the possibility of induction must be judged as mistaken. Keynes declares that the logical foundation for inductive arguments is that "the amount of variety in the universe is limited in such a way that there is no one object so complex that its qualities fall into an infinite number of independent groups." Broad interprets this principle to mean that there must be but few substances or kinds out of which nature is built. Moreover, if our generalizations are to be universal we must ascribe a finite probability to the proposition that "the set of characters which condition the generalization, are *not* the possible effect of more than one distinct set of fundamental properties." We have already discussed some of the bearings of such principles on the logic of probability. We ask now whether, and on what further assumptions, inductions are to be based upon them.

We may grant, in the first place, that if the structure of things were infinitely complex (in the sense that the character of any event was a function of an indefinitely large number of independent variables) science as we know it would be impossible. Science would be impossible even if the number of variables was finite, but still too large to manipulate them and their relations with our present methods. Many students despair of the possibility of a science of economics or politics in any way comparable to the precision of the natural sciences, because of the difficulty in studying in any controlled manner the large number of variables involved. But this requirement that the structure of things be simple in order that science be possible, is a concession to the deficiencies of our technique. We are fortunate indeed that we live in a universe where only a very small number of variables need be taken into account to explore large regions of it. In physics not more than a dozen independent variables are needed to survey the type of behavior this science studies; and many of the typical laws, such as that of the law of free falling bodies, require only two independent variables.

Consequently, these observations do not prove the proposition that if there were an infinite number of independent variables, inductions would *necessarily* have to come to an end. Nor do they help prove that a sufficient condition for the possibility of induc-

tion is a limitation upon the number of variables. For consider an urn containing an infinite number of balls differently colored. *Unless we assume that in drawing the balls they were all equiprobable*, the conditions stated are not incompatible with the fact that *one* color would be continually drawn, even though the number of different colors is without limit. Similarly, if an urn contains a finite number of balls, half white and the rest black, and if we draw and then replace samples of ten each, it does not follow that the character of the samples must represent the character of the contents of the urn, *unless, once more, we assume that all the complexion of colors are equiprobable*.

The supposed fact that there are only a finite number of independent variables in the construction of nature, does not therefore guarantee the conclusion that some interconnection of variables is more likely to hold than another. For it is absurd to suppose that every interconnection is *as* probable as any other on the basis of no evidence. Scientific method would be useless if a segment of nature under investigation could not be isolated from the rest of nature. But that such isolation can be effected does not follow from the existence of either a finite or infinite number of fundamental features. And the assertion that one combination of such features is as "probable" as any other is just nonsense if probability has the meaning we have found it to have.

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BOOK REVIEWS

Das Kausalgesetz und seine Grenzen. PHILIPP FRANK. Vienna: Julius Springer. 1932. 308 pp.

The appearance of a positivistic treatment of the causal problem is most welcome, first of all, because positivism is peculiarly fitted to treat of modern causal concepts, and secondly, because a treatment of causal law is peculiarly adapted to reveal the method and pre-suppositions of positivism. This book has been occasioned, as one may read in the preface or between the lines throughout, by the recent attempts to inject animistic or psychic factors into physical phenomena by a misinterpretation of the new mechanics. Unfortunately the author's well-prepared broadside is scattered during the engagement and directed successively against the abstract metaphysicians, the vitalists, the *Energetiker*, the dialectic materialists, and the scholastics, with a resulting minimal damage to each.

The vitalists and metaphysicians suffer worst in the encounter.

On the basis of the pragmatism underlying all positivistic utterances, vitalism can not represent a *scientific* hypothesis, because it can not be tested experimentally. On the same score, statements of metaphysicians are apt to be mere jumbles of symbols or tautologies. Thus the statement that "everything is determined" becomes a tautology when we mean, by "everything," "that which is determined," and we are apt to imply such a meaning. The test of a statement concerning actuality is this: If the contradictory of the statement is significant, the statement itself says something concerning the actual world and is not a mere tautology. The determination of significance, of course, depends on the range of the universe of discourse.

Professor Frank's final contention is this: Any statement of the causal law in its full generality and precision becomes a mere tautology. Only the introduction of arbitrary conditions in the definition of causal sequence can convert such a tautology into a proposition concerning empirical facts. The arbitrary conditions may limit the expression of the causal law to "simple" formulae, or consider only a "few" physical quantities. In the ambiguity of the words "simple" and "few" lies the escape from tautology, and the ambiguity is essentially irreducible.

This conventionalism eventuates in the notion that "causal regularity" can mean only "regularity in the appearance of a set of characteristics obtained by a special type of abstraction." Thus there are certain causal regularities within the science of physics, another type of regularity within the characteristic abstractions of biology, and so on. The difficulties and seeming triviality of this view are thoroughly discussed in Chapter IX of the book. Such a point of view obviously rests on the assumption of recurring phenomena, or at least certain recurring characteristics of phenomena. The difficulty lies in the detection of periodic phenomena without the use of the causal law that is to be established. Thus, to define two states as "identical" when "identical" sequences follow from them is to argue in a circle. To define two states as identical in respect to certain selected characteristics is to analyze a phenomenon into sequences of discrete sets of characteristics with the simplest possible laws holding in each set. A difficulty arises here which Professor Frank does not consider: How are we going to correlate and order these various types of regularity? Is one type of causal sequence to be regarded as fundamental, so that we may reduce biological and psychological sequences, for example, to those of physics? Even within one science there are contradictory causal laws that need reconciliation. These problems are most serious for the new sciences of bio-physics, bio-chemistry, physical chemistry,

and psychology. The goal of scientific analysis is not the description of arbitrary causal regularities, but the reduction of all such sequences to fundamental sequences expressed by the simplest causal laws. It is this demand for ultimacy that positivism is apt to overlook.

The chapters in the book on problems within the province of physics are much superior to the rest. The chapter on determinism gives a good account of the history and implications of the Laplacian theory of determinism. Questions of observation and predictability in the chapter on the new mechanics are discussed with particular regard to Laplace's hypothesis. This chapter on "Kausalität und Quantenmechanik" is an excellent non-technical introduction into the methodological difficulties of the physicist in his own domain. It is unfortunate that Professor Frank feels called upon to take up the cudgels against those who would insert free will into the causal gaps left by the principle of uncertainty.

The chapter entitled "Von der sogenannten wahren Welt" is a digression on behalf of positivistic method in science and philosophy. The concept of a true world to which we can never attain is a meaningless concept for such a methodology. It can never be proved true or false. All *proofs* take place on the plane of our experiences, and these experiences alone give us our real world. Thus any statement that the world is contingent "in reality" or determined "in reality" has no content. The limits to scientific analyses in terms of regularities in sequence can never be set by theology or metaphysics. Only science itself can meaningfully set these limits.

The curious delight of the author in setting up straw men that he may demolish them at a stroke renders many sections of the book trivial and unconvincing. The real contributions are made in attempting to define terms that have become ineffable and ambiguous in the hands of metaphysicians. Thus there is no meaning in the terms "pure chance" or "world-plan." Chance must be defined in relation to this or that causal regularity, since a general causal law does not hold in the world. The action of chance is simply the action of factors which fall under none of our present laws of sequence. A general "world-plan" is equally meaningless, since it could never be discovered by human intelligence. It is a *Grenzbegriff* and a useless one for any scientific philosophy. It is the shrewd common sense of this "scientific" analysis that will recommend itself to all those lost in the maze of modern discussions of causality.

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The Science of Character. LUDWIG KLAGES. Translated from the fifth and sixth German editions by W. H. Johnston. Cambridge, Mass.: Sci-Art Publishers. 1932. Pp. 308.

Scientific psychology, while it does show promise in some of its openings, leaves the inquirer of human character and personality disappointed as he plows through a weary waste of disjointed parts. With all due respect to the prevailing use of the experimental method in the study of character, the all too meagre results thus far seem to cast still greater doubt upon the validity of the experimental procedures used in the field of the mental sciences, and particularly in the field of characterology. We must admit a very marked and painful disproportion between the vastness of the scientific machinery employed by American students of character and the value of the ultimate results. German students of character differ from their American colleagues in that they do not suffer from an excessive fear of theories as a means of interpretation, that is, they have no mistrust for philosophy or metaphysics. Hence their contributions to the subject are more organically related to the totality of human problems. If we compare the achievements of academic psychology in yielding insight into human character with those of the Romantic period of German culture, no one can gainsay that the psychological observations of a Goethe, Jean Paul, C. G. Carus, and Novalis outweigh in significant knowledge those of scientific psychology. It is a patent fact that no historian has as yet done full justice to the magnitude of the contributions to individual and social psychology due to the Romantic school.

In opening up the field of the science of character, the author thus offers at first his criticism of academic psychology. He repeatedly punctures some of its biases and eccentricities, and stresses the points which it deliberately neglects. It is his passionate conviction that the works of F. Nietzsche contain psychological achievements of the first magnitude for a possible future psychology.

One of the basic conditions governing the discovery of character is the science of expression, technically termed physiognomology or psycho-diagnostic. This phase of the study of character has been rapidly gaining ground in Germany. Psychodiagnostic is the approach to the understanding of character from external symptoms such as features, facial expression, vocal inflection, gait, gesture, handwriting, etc. While there is as yet no science of expression or of graphology, this does not preclude their becoming a science. Lavater, Carus, Piderit, Gratiolet, Duchenne, Bell, Darwin, and Preyer have been collecting all sorts of data that serve as a partial basis for such a science. It was above all Klages who placed graphology on a respectable scientific footing, as has Robert Sandek, whose

treatises on handwriting are available in English. While most books on the subject are worthless, Klages has rendered an enviable service in discovering some of the basic principles underlying the science of expression. The author mentions self-knowledge, similarity or participation, and polarity or complimentary contrariness as principles governing the discovery of character.

With systematic self-recollection, speech or language constitutes the major methodological principles of the science of character. Academic psychology has invented all sorts of mechanical apparatus to spy out the mind of man. It has, however, failed to realize sufficiently that the master-key to the mind is speech or language. The inner life of folks—past and present—is apprehended by the aid of tradition-laden words. Besides, speech is an essential part of the science of expression. Language possesses a psychological capacity for revealing the inner processes of men. The author thinks that language has more psychological insight deposited in its words than scientific psychology with all its ingenious and complicated experimental tools.

Character comprises three distinct groups of properties. The quantitative properties such as capacities, aptitudes, talents. These constitute the basic materials of character. The directive properties such as the numerous driving forces or interests constitute the nature of character. The relative properties or temperament, the personal medium, the manner in which the internal processes run their course constitute the temperament or the structure of the disposition of the personal medium. These are properties of proportion and ratio, each of which may be represented by a quotient.

In Chapter VII the author explains his ingenious theory of the structure of character. It possesses three properties: personal capacity for stimulation of feelings, will, and personal capacity for expression. Temperament approximately corresponds to the capacity for stimulation of the will, and what an earlier psychology vaguely termed "humour" corresponds with the personal capacity for expression. All three properties of character can each be represented by proportional magnitudes.

The chapter on the nature of hysteria is in the nature of an interlude. The author presents a minute analysis of the atrophy of feelings in the hysterical character. He rejects the usual psycho-analytic interpretation of hysteria. Contrary to the popular view that some manifestations of hysteria are "imaginary," the author contends that the patient does not at all simulate the disease. He is the defenceless victim of the transforming influence of pacts of images because certain vital processes produced these phantasms in him. The hysteric type of person suffers from a central feeling of

impotence. Hence the readiness with which he organically imitates aspects of alien lives, thus seeking to represent experiences which are most likely to excite attention. Since he feels incapable of experience he desires to represent what he is not capable of feeling. Hence he has the capacity for deceiving himself and others.

Next the author presents a very exhaustive consideration of the metaphysics of personality, in which the Greek, respectively the Romantic conception of man as body, soul, and spirit, is fascinatingly explained. His conception of spirit is voluntaristic, conforming to the metaphysical views of a Nietzsche and Schopenhauer by stressing the negative and destructive nature of will.

Nice distinctions and significant analytical definitions constitute a refreshing feature of the work. It is a monument of intellectual vigor and rigor. It is the ripe product of the author's reflections on and extensions of the subject for the last two decades or more. It would be an interesting and no doubt fertile undertaking if someone would make a detailed character study of some well-known historical personality in the light of the author's *Science of Character*. Klages is in his reflections on "civilized man" a pessimist of doom, and in his psychology a pessimist of joyful release, exalting both the psychological and spiritual qualities of man.

LAMONI, IOWA.

HERMAN HAUSHEER.

JOURNALS AND NEW BOOKS

INTERNATIONAL JOURNAL OF ETHICS. Volume XLIV, No. 1. Philosophy as Vision: *Wm. Pepperell Montague*. Reallocating Earnings and Wages: *Carl F. Taeusch*. The Logic of Ethical Intuitionism: *Leo Abraham*. Apology for Aesthetes: *Van Meter Ames*. The Problem of World-Unity: In Quest of a Myth: *Harold D. Lasswell*. Social and Moral Ideas in the Upanishads: *Mahendra Nath Sircar*. Oughtness and Order: *T. V. Smith*. Discussion—A Scandal Scanned, or How to Keep Philosophy Respectable: *Paul DeLargy*.

ERKENNTNIS ZUGLEICH ANNALEN DER PHILOSOPHIE. Band 3, Heft 4-6. Die methodol, Grundlagen der Biologie: *Max Hartmann*. Dokumente über Naturwissenschaft und Philosophie. Briefwechsel zwischen *Fr. Albert Lange* u. *A. Dohrn*. Über die Grundbegriffe der Philosophie und die Gewissheit unserer Erkenntnisse. Aus dem Nachlass: *Josef Popper-Lynkeus*. Commentar zu Josef Poppers Abhandlung: *Heinrich Löwy*. Über die begriffliche Bestimmung der Sinnesinhalte (das Messen in der Sinnesphysiologie) und über

das Webersche Gesetz: *Yrjö Renquist*. Die nominalistische Grundlegung der Mathematik: *Leon Chwistek*. Das Wesen des Naturgesetzes: *A. Pannekoek*. Die logischen Grundlagen des Wahrscheinlichkeitsbegriffs: *Hans Reichenbach*.

Anderson, Paul Russell: *Science in Defense of Liberal Religion. A Study of Henry More's Attempt to Link Seventeenth Century Religion with Science*. New York & London: G. P. Putnam's Sons. 1933. 232 pp. \$3.00.

Radhakrishnan, S.: *An Idealist View of Life. The Hibbert Lectures for 1929*. New York: The Macmillan Co. 1933. London: Geo. Allen & Unwin, Ltd. 351 pp. \$4.00.

NOTES AND NEWS

We print by request the announcement of a prize of \$1000 to be offered by the Soziologische Gesellschaft and the Philosophische Gesellschaft (Ortegruppe der Kantgesellschaft) of the University of Vienna, for an essay on the theme "Scientific Work of Wilhelm Jerusalem, with Special Reference to his Relation to the Social Sciences." Special attention should be paid to Jerusalem's contributions to sociology, pedagogy, and teaching, as well as to the application of sociological methods to the problems of language, knowledge, etc. The essays should be thoroughly scientific in character, arranging normally from five to ten printed sheets, although shorter or longer essays will be accepted in the competition. The essays may be written in German, French, Italian, or English. If written in other languages, they should be accompanied by a translation into one of the languages already mentioned. Each essay is to be identified by a pseudonym and the name and address of the author are to be attached in a sealed envelope identified by the same pseudonym. Essays will be received up to the first of December, 1934, at the address, Dr. Walther Eckstein, Kirchstetterngasse 49, Vienna XVI, Austria. The Committee of Award, consisting of Prof. Max Adler, Prof. Karl Bühler, Dr. Walther Eckstein, Prof. Viktor Kraft, and Prof. Karl Roretz, reserves the right to divide the prize if advisable.

THE JOURNAL OF PHILOSOPHY

There is no similar journal in the field of scientific philosophy. It is issued fortnightly and permits the quick publication of short contributions, prompt reviews, and timely discussions. The contents of the last six issues are as follows:

Volume XXX. No. 14. July 6, 1933.

Charles Peirce's Guesses at the Riddle. ERNEST NAGEL.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 15. July 20, 1933.

The Right and Good: Methodology in Ethics. SARAH H. BROWN.
On Using the Word "God": A Reply. HENRY NELSON WIEMAN.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 16. August 3, 1933.

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NATURALISM AND AGNOSTICISM IN SANTAYANA

REPEATED readings of Santayana produce in me the mood of exasperated delight. Perhaps this is as he would intend. Surely he could not write with the charm of a style that almost distracts attention from content unless he meant to delight; surely also he can not be averse if others find in his writings some of that delight which he obviously finds himself in his own philosophic pursuits. Yet he is no sentimentalist and would not have any reader soothed by his books. Has he not himself said that it is not the aim of philosophy to feed us on sweets and lull us in errors?

The delight I feel is due chiefly to two factors. One of these is the happy precision of phrase in which some important insight is summed up with trenchant force. This precision is more than the charm of style of which I just spoke: it is primarily a matter of such complete intellectual grasp of a topic that the entire essence of the topic, separated from accidents and irrelevancies, can be succinctly stated. Indeed I find it hard to avoid some of Santayana's phrases in dealing, even in my own thinking, with subjects on which his epigrammatic utterances have captured my imagination. I shall never be able to think of fanaticism except as the blunder of a man who redoubles his efforts when he has forgotten his aim, nor of art except as those perfected human operations in which the purpose is conscious and the method is teachable. I find new significance for education and politics as well as morals generally through conceiving piety as the serious attachment to the sources of one's being and the steadying of life by that attachment. I do not know how much my opinions of current events may be colored by the wicked jibe that in a democracy every one does as he wishes and no one gets what he wants. In these and a host of similar felicitous phrases Santayana opens up for me lines of profitable inquiry. His sentences, more than those of any other contemporary philosophic writer, have the finished form of great art.

Then again he delights me by the richness with which he has illustrated the truth that "in the Life of Reason, if it were brought to perfection, intelligence would be at once the universal method of practice and its continual reward."¹ His writings are far more

¹ *Reason in Common Sense*, p. 5.

than a series of pregnant utterances on detached points of interest. He has pursued a great theme, perhaps the greatest theme of "the philosopher," through many important fields of human interest,—domestic and economic and political institutions, industrial and fine arts, religion, science, and the growth of rationality itself; he has heightened the significance of Greek philosophy by restating the life of reason in connection with various modern concerns and problems. The persistence with which he has followed his controlling theme through all these vital phases of our common human experience makes, as it seems to me, his *Life of Reason* one of the masterpieces of modern philosophy.

Yet I have ventured to say that repeated readings of Santayana produce in me the mood of *exasperated* delight. And my present purpose is not to praise Santayana, but to air the grounds of my exasperation. The more I reread the books that Santayana has written, the more perplexed I am concerning his attitude on certain fundamental issues of metaphysics. Of course he would protest that he has never been guilty of writing metaphysics at all. For he chooses to use the term "metaphysics" to mean unverified speculations about the nature of existence. I hasten to agree that in that meaning of the term, metaphysics is a spurious science and an illicit and vain performance. And I recognize further that much "metaphysics" in recent times is just such an illicit performance and warrants that peculiar (though, I believe, unfortunate usage) of the term. But I am using the term in a different sense. I am using it in the sense in which I think it was originally used when it meant the kind of reflection which is to be found in the unnamed work of Aristotle to which the term happened to be applied. In that sense metaphysics is a body of "first principles" about existence which we find to be warranted by observation and experiment. Or, in other words, metaphysics is a systematic statement of the fundamental assumptions that lie at the base of any and all sciences about existence, provided that we have made those assumptions explicit and have tested them out by all the tests by which any principles can be tested. And when I say that I am perplexed by Santayana's attitude on certain fundamental issues of metaphysics, I mean that I am left, after repeated and careful (and I believe sympathetic) reading of his books, in a state of uncertainty as to what he really means to say. I think that on some of those issues I know the truth; I think, moreover, that the brilliant insights of Santayana are not simply consistent with, but actually depend upon, what I regard as true solutions of these metaphysical issues. In fairness I must hasten to say that at times I find in Santayana's writings a recognition, often implicit and occasionally explicit, of these very prin-

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ciples. But I also seem to find—and this is the cause of my exasperation—a virtual denial of these principles and a formulation of alternative principles that are incompatible with the former principles and are really false. These latter principles would often weaken or annul the force of Santayana's distinctive treatment of the life of reason and the enterprise of intelligence. Perhaps I am at fault in taking figurative language too literally or in missing some of the elusive irony of Santayana's words. But in the later writings I find a growing emphasis on what seem to me the unsound and unfortunate metaphysical assumptions; and therefore I am regretfully led to believe that the seeming equivocations of the earlier volumes are really what the language makes them seem to be. So I conclude that Santayana is not clear in his attitude to what I call metaphysics and must meet certain metaphysical issues before his philosophy is at all consistent or satisfactory in its implications. The sound metaphysical principles which he at times expresses I would call his naturalism (in the sense in which Aristotle is the great naturalist); the unsound metaphysical assumptions that creep in and grow increasingly obvious in successive books are a kind of agnosticism which, absent from Plato and Aristotle, arose in modern philosophy under Descartes' influence, controls the *Essay* of Locke, and reaches a kind of culmination in Spencer. At least I shall develop the contrast between two attitudes that Santayana seems to me at different times to assume, even though I run the risk of merely showing my own inadequate reading of his books. The question is important, whether or not I raise it in correct fashion.

In the first volume of *The Life of Reason* we find a brilliant introductory statement of what has always been the leading theme of Santayana's thought. He there gives us a discussion of what has been happily called "crises in the life of reason." Our human experience begins with a chaos of strange qualities and inexplicable sequences, and is almost overwhelmed by "the crushing irrationality of existence." Impulse and ideation are so lacking in correlation that the first is disastrously vain and the second is pathetically visionary. Then training begins under the pressure of the need of adjustment to the menacing threats that crowd upon the human animal from what lies about him; and eventually, through a discipline that is never wholly complete, there comes to be discerned an intelligible order. The pains and pleasures that follow upon thwarted and satisfied impulse compel attention to certain items of the "loose elements" of experience and transform them into "things" or "conceived realities" of relatively permanent status in the environment. Exigencies of practice lead men to neglect "the irrelevant infinity of ideas" and hence to distinguish between the realm

of nature and the sphere of the imagination. The dramatic values things have for human life require men to seek for control and thus teach them to discern causes and to discover the principles that tie together various things in an integrated nexus or cosmos. Thus the passing sensation becomes but an appearance of a reality that, as a term of discourse, is "a psychic complex of memories, associations, and expectation."² And the increasing integration of human life, especially as political organization gives rise to concerted and comprehensive planning, produces the idea of a unified nature, from which are banished all those "parings of experience" that do not fit into its systematic totality.

The wealth of detail with which Santayana develops this growth of reason in man's attitude towards existence need not be reviewed here. But we must take note of the metaphysical principles with which his theme is constantly accompanied. He never lapses into any of "the noble ambiguities of idealism." He never breaks with the naturalistic position according to which substance is prior to life, consciousness, and reflection. He insists that common sense is right against all subjectivism in "regarding nature as the condition of mind and not mind as the condition of nature."³ He does not conceive substance as artificially constructed out of experience, but holds an antecedently existing substance to be the source of all the rich complexities (including the moral and spiritual facts and processes of the human world) that come to pass in the course of history. Hence something we may call "nature" is the matrix of whatever time and change bring about in the way of composite bodies and their consequent functions. Nature is "a set of conditions" for the appearance of all sorts of happening, physical, mental, good and bad. He does not first denaturize nature and then (and as a consequence) mythologize mind. He so regards nature that all distinctions pertinent to existence fall within it; and he thus avoids the two false extremes of annulling actual differences by formulating some vapid monism and hypostatizing some selected difference into a hard and fast dualism. He cuts with true wisdom under the superficialities of much current popular philosophy.

And yet I am far from satisfied with certain ways in which Santayana amplifies his conception of nature. At times he is thoroughly Aristotelian and sound. He says explicitly that "nature is the sum total of things potentially observable, some observed actually, others interpolated hypothetically."⁴ He takes the development of reason to involve the progressive discovery of reality as one element in the progressive discipline of the mind. To pass from

² *Reason in Common Sense*, p. 82.

³ *Ibid.*, p. 104.

⁴ *Ibid.*, p. 104.

the fleeting enjoyment of a "sensation" to the perception of a relatively permanent "thing" is to move out of subjectivity towards objectivity. Reason infers an order of nature vaster and more regular than the items of immediate experience; but it does so by taking those items as a part of the natural order to be known. But this Aristotelianism of Santayana is curiously mixed up with foreign conceptions borrowed from Cartesian traditions of modern philosophy. According to these traditions the data of experience are not aspects or phases of things in the cosmic order, but items from another order altogether. In the earlier of Santayana's writings this other order is usually conceived as a series of psychic states and in the later writings it is conceived to be the timeless realm of essence. But in both cases the immediate content of experience falls outside of the cosmic order. Thus there is "an *external material world*"⁵ that is hidden from direct observation. Santayana never becomes so romantic as to suppose that mind builds the cosmos out of psychic states or essences; but he treats knowledge sometimes as a transitive process from part to part of the cosmos and sometimes as a transitive leap from realm to realm. He acknowledges the paradoxical character of the latter position when he ejaculates "Strange that the only possible object or theme of our knowledge should be something we can not know."⁶

In the former or Aristotelian position nature is the larger whole of which experience is a fragmentary and disordered part. In the latter position nature is an equivocal affair. It is not immediate experience; for that is lacking in stability, coherence, unity, and integrity. It is not the "external material world" which supports experience; for that is something we can not know. It is a "Platonic system." When we build up "such atomic and astronomical theories as science is now familiar with," we are dealing with "an abstraction."⁷ Take as a sample of this equivocal position the following passage. "When you distinguish your sensations from their cause and laugh at the idealist (as this kind of sceptic is called) who says that chairs and tables exist only in your mind, you are treating a figment of reason as a deeper and truer thing than the moments of life whose blind experience that reason has come to illumine."⁸ Nature (for nature is the whole congeries of objects of which chairs and tables are homely instances) is here spoken of as a "figment of reason"!! And science is then an arbitrary enterprise of fabricating symbols that have pragmatic value but no ontological status. Without the dogmatic insistence upon the reality of

⁵ *Ibid.*, p. 87. Italics mine.

⁶ *Ibid.*, p. 76.

⁷ *Ibid.*, p. 122.

⁸ *Ibid.*, p. 80.

independent substances, this second position would easily lead into such romanticisms as Santayana often deprecates in French and German thought. Even with that dogmatic insistence the position makes nature into a conventional fancy that reason accepts only because real knowledge of "external" reality is impossible.

What indeed does it mean to say that "the real sun is so far from being an original datum from which roundness is abstracted, that it is an ulterior and quite ideal construction"?⁹ Does it merely mean (what is quite true) that the real sun could not be known unless intelligence worked with the fragmentary data of sense? Or does it mean (what seems also to be said) that "real" objects are built up out of those data? Is Santayana in this passage talking psychology and giving us the natural history of intelligence? or is he talking metaphysics and distinguishing the "nature" we come to know from the external realities we at the same time fail to know? The latter would appear to be his momentary intent; for in the same chapter he writes that "to discover a physical object is to pack in the same part of space, and fuse in one complex body, primary data like coloured form and tangible surface."¹⁰ He speaks of an object's qualities as "its original and component elements": indeed he speaks of the qualities discerned in sense as "themselves the true particulars." Hence he is led to contradict his ordinary position and to speak of "the immediate flux" as the "substance" out of which we manufacture both mind and nature.¹¹ Even in this agnosticism about external reality Santayana remains a kind of naturalist; for he never forgets that some "external" substance is always generating this experience of ours and giving us "raw experience" as a material from which to construct what we will. But he is not in these passages an Aristotelian naturalist; for he treats the nature we know as a human fabrication that is distinct from the nature that produces us and our deceptive fabrications.

The equivocation with which Santayana shifts from one to another of these two metaphysical points of view is not absent from any chapter of the first volume of *The Life of Reason*. Perhaps this is simply because he is here so preoccupied with the moral aspects of knowledge that he never meets squarely the question of the ontological validity of knowledge. At times he compares religious interpretations of the world (such as the Christian Epic) with scientific interpretations in one way and at other times in another. Religious interpretations he always asserts to be symbolic of the moral and esthetic rôles that things play in human life. Scientific interpreta-

⁹ *Ibid.*, p. 168.

¹⁰ *Ibid.*, p. 162.

¹¹ *Ibid.*, p. 126.

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tions he sometimes treats as the efforts to reach the literal truth about things, which (even where they fail of reaching that truth in any final and authoritative fashion) are yet headed in the right direction and yield a degree of assured and genuine knowledge of the cosmos. And then again he treats them as utilitarian devices of no more ontological value than the moral and esthetic pictures of religious faiths. It would be plausible to say that Santayana was caught in the meshes of his own brilliant analysis of the growth of human rationality. For in making that analysis he naturally speaks in psychological language: he talks of objects as "the cohesion in space and the recurrence in time of recognizable groups of sensations."¹² But one can not properly transfer to ontology the enlightening metaphors of psychology. One can not legitimately treat nature as constructed in the fashion by which we reach our concepts of it. But unless the nature we come with the growth of reason to understand and to know is identical with the reality that supports experience, it is only a fabrication of our own minds. And in that case reason would be no more than conventional fancy.

As we pass from *The Life of Reason* to the more recent series on *Realms of Being* the equivocations are no less frequent, but the emphasis is considerably changed. Whereas in *The Life of Reason* Aristotelian naturalism is the dominant attitude and agnosticism intrudes largely in metaphors and illustrative material, in *Realms of Being* agnosticism is boldly and explicitly proclaimed and Aristotelian naturalism appears only occasionally in what seem like lapses where Santayana has not taken pains to maintain his agnostic position. Indeed the agnosticism is set forth almost as a pose which can not be dialectically circumvented (as indeed no philosophical standpoint can be overthrown when its defenders hold consistently to the implications of their first principles). Thus the new series is more enlightening as a revelation of the implications of Santayana's own intellectual development than as a resolution of the metaphysical difficulties of the earlier work. Santayana has turned from preoccupation with moral problems to a direct interest in epistemological theory; and in so doing the non-Aristotelian elements in his thinking become more prominent. Yet even here equivocations keep emerging in the exposition of various points.

One recurrent theme of *Realms of Being* is that "nothing given exists." In other words the immediate data of experience are timeless essences rather than aspects of the enduring substances of the "external world." Yet Santayana betrays in frequent phrases that he is far from accepting the implications of this major theme. Even in assuring us that the child's sensuous experience is not the

¹² *Ibid.*, pp. 82-83.

moon for which he cries, he offers as proof of his contention the child's "fixed gaze and outstretched arm" which any one of us is evidently supposed to be able to see.¹³ The argument is not that a child can not directly see objects that are visible to mature eyes. For the child's "bodily attitude" not only "*identifies the object in the discourse of an observer,*" but also "*identifies the object for him, in his own subsequent discourse.*"¹⁴ The argument is that substances are not directly perceived; but the argument proceeds to appeal to substances that are directly perceived. Surely there is equivocation here. Similarly when Santayana assures us that "the only facts observable by the psychologist are physical facts,"¹⁵ or when he finds it significant to remark that "what I tuck under my pillow at night, I find there in the morning,"¹⁶ he is giving himself away. Such assertions are hardly compatible with the agnostic contention that "nothing given exists" and that belief in substances is due wholly to "shocks" that interrupt our intuition of timeless essences.

The fact of the matter, at least as repeated readings of Santayana's books make it appear to me, is that in turning to theories of knowledge and ontology Santayana remains essentially a moralist. He would reconcile us to accepting the universe with humility and patience and would encourage us to live bravely and spiritually. He says of himself: "I myself have no passionate attachment to existence, and value this world for the intuitions it can suggest, rather than for the wilderness of facts that compose it."¹⁷ And as for himself, so (in spite of his genuine tolerance and appreciation of alternative ways of life) he would have it for others. It is difficult not to guess that the strange dictum that "nothing given exists" is an epistemological *tour de force* to turn our thoughts from substances that change to meanings that are eternal.

But whether such reflections are just or not, the equivocations remain. And another instance of them is to be found in his treatment of the principle that "existence is irrational." He uses this dictum at times, with entire wisdom, to warn us that existence is not usually moulded according to the heart's desire or the idealist's dream. "Existence," he says, "is accordingly not only doubtful to the sceptic, but odious to the logician."¹⁸ We not only may, but must, doubt with empirical modesty concerning existences that lie beyond experience. And when we come through experience to

¹³ *Scepticism and Animal Faith*, p. 172.

¹⁴ *Ibid.*, pp. 173, 174. Italics in the text.

¹⁵ *Ibid.*, p. 257.

¹⁶ *Ibid.*, p. 236.

¹⁷ *Ibid.*, p. 171.

¹⁸ *Ibid.*, p. 48.

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know some few existences, we should not try to account for them as if there were a reason for their being at all or being in particular what they actually are. We must accept them; and only after accepting them may we make them the basis of our inferences and the test of our beliefs. Hence it is correct to say that "if there is any existence at all, presence to consciousness is neither necessary nor sufficient to render it an existence."¹⁹ But it does not follow that existence in some of its phases may not be directly presented at times and under certain conditions to a consciousness that may observe it. Perhaps we come here to an ultimate matter of fact that can not be argued but can only be asserted in accord with what we find experience to be. Only I find that much that is given does exist and must reject Santayana's dictum that "nothing given exists." And I make the charge that Santayana is guilty of equivocation because I detect him taking for granted at times the same Aristotelian naturalism I profess and he at other times explicitly denies. I would agree with him that "the only critical function of transcendentalism is to drive empiricism home."²⁰ But transcendentalism performs this function, it seems to me, by forcing us to note carefully what existences are given and what are not, rather than by enabling us to assert that nothing given exists. Indeed unless some existences were given, transcendentalism would be legitimate and inevitable; and in at least a large part of his writings, earlier and later, Santayana himself is unwilling to grant any such thing. One may well enjoy the playful mood in which in the first few chapters of *Scepticism and Animal Faith* Santayana shows how impossible it would be to refute the consistent advocate of "solipsism of the present moment";²¹ but unless Santayana broke with his own agnosticism at times, he would himself be unable to know so clearly that existence is foreign to many human hopes and dreams and relentless in its inevitable course.

In some of his detached essays Santayana reveals significantly his intellectual kinship with certain historic figures. For example in his Herbert Spencer Lecture on *The Unknowable* Santayana pays generous tribute to Spencer for insisting on the reality of an external substance that is the source of life and mind. He doubts a bit whether the term "Unknowable" is a suitable word by which to designate this substance. For we know *that* it exists: we know it operates in infinite modes and produces in us the phenomena we call "appearances." Yet Spencer was, he tells us, on the right track. For he recognized that appearances are only "secondary

¹⁹ *Ibid.*, p. 45.

²⁰ *Ibid.*, p. 4.

²¹ *Ibid.*, p. 17.

facts and not, as is often alleged, the fundamental or only realities."²² Appearances are, no more than the names we apply to objects, any real part of them. Substance works by "secret operation" and never reveals its inner nature. If our ideas are more than symbolical of the effects things produce in us and the expectations we may rightly entertain of their future actions on or in us, that is merely a happy chance and can hardly be distinguished as such when it may occur. Experience may explore the world adventurously and science may describe it with precision; but "after you have wandered up and down it for years, and have gathered all you could of its ways by report, this same world, because it exists substantially and is not invented, remains a foreign thing and a marvel to the spirit."²³

Santayana ought indeed to be more generous to the memory of Herbert Spencer than most of Spencer's critics have been. For he shares with Spencer the fault that those critics have pointed out with wearisome repetition. As in Spencer, so in Santayana, the "nature" that the physical or existential sciences claim to know is not the underlying substantial world that brings all things to pass in its countless changes, nor is it the confused mass of isolated sense-data that are said to be the "raw material" for knowledge. It is neither flesh, fish, nor fowl, nor good red herring. The sciences thus are "about" nothing that is real at all except in so far as we pretend to forget that we are feigning. When we do so forget, we identify nature with the ultimate substance of the world outside experience, and our grandiloquent generalizations then gain dignity and power. Spencer chose to forget most of the time; and so his generalizations are uttered with pompous eloquence. Santayana forgets but seldom; and so his generalizations are tentative and his conclusions ironic.

The more obvious kinship of Santayana, however, is not with Spencer, but with Locke. The kinship is not a moral one. For when Locke came to realize that his theory of ideas was making it logically impossible for him to know real substances (other than the self by intuition and God by demonstration), he exhibited a genuine ontological distress; and when Santayana displays the agnostic implications of his theory, he indulges in a whimsical esthetic playfulness. But a kinship of metaphysical standpoints is clearly discernible. In the Herbert Spencer Lecture Santayana is almost quoting Locke when he writes that the "intrinsic character of things," though undiscovered or inexpressible by us, would yet be disclosed at any moment "if a new observer turned up with

²² *The Unknowable*, p. 6.

²³ *Ibid.*, p. 29.

the requisite organs, and a more sympathetic imagination."²⁴ Neither Locke nor Santayana pauses to explain why other sorts of organs would be more ontologically satisfactory than the ones we happen to possess. Both seem to be trying to defend the empirical appeal to sense as a corrective of the vagaries of fancy at the same time that they disparage the findings of sense for metaphysics. In any case they are akin in that they both hold to empiricism while they mutilate the sound grounds on which empiricism must rest.

Santayana's kinship with Locke has just been corroborated in his delightful tercentenary lecture on Locke and other essays that have appeared in his little book on *Some Turns of Thought in Modern Philosophy*. No animal, writes Santayana, can be "aware of what goes on beyond him, except as it affects his own life."²⁵ As in Locke experience was both a basis for all knowledge and a screen which cuts us off from the real world, so is it with Santayana. "Science," Santayana acknowledges, "when it is more than the gossip of adventure or of experiment, yields practical assurances couched in symbolic terms, but no ultimate insight."²⁶ We may even have alternative sciences of existence as of geometry; and we may choose between these alternative systems on grounds of convenience or convention. Science is "a human language" of symbolic character; and if we would deal with existence itself, we must resort to faith. Of course, Santayana continues, "the appearance of things is always, in some measure, a true index to their reality"; for it is possible for us "to discount appearance and to correct illusions," so that external fact may indeed "come within the range of consciousness, not indeed by being contained there, but by being aimed at."²⁷ That is, we can not know all things, but only those that concern our station; and though we can not plumb the depths of existence, we may know enough to live well and to save our souls. (Of course the kinship evaporates and gives place to sharp antagonism as soon as we ask Locke and Santayana what our souls are and in what our salvation consists!)

The difficulties that exasperate me appear once more in Santayana's fascinating book, *Dialogues in Limbo*, though they here have a new context and perhaps a slightly new form. Santayana proclaims himself a follower of Democritus "in respect to the substance and origin of things."²⁸ He had already said that "in natural philosophy I am a decided materialist—apparently the

²⁴ *Ibid.*, p. 16.

²⁵ *Some Turns of Thought in Modern Philosophy*, p. 9.

²⁶ *Ibid.*, p. 79.

²⁷ *Ibid.*, p. 37.

²⁸ *Dialogues in Limbo*, p. 29.

only one living'';²⁹ and he here reveals the basis of his materialism in the atomism of Democritus. In the very spirit that gave birth to the Epicurean philosophy Santayana deals with human life as a form of madness. For life tends to be too much in a hurry with its passionate cravings to note "the distinction between things as they exist in nature, and things as they appear to opinion."³⁰ The being of things "is indomitable substance and motion and action, and to add thought, impalpable and ghostly, is to add madness."³¹ The illusion to which life leads is not inevitably an evil: indeed it may be a great and glorious good, since it makes possible love and beauty and religion. It only becomes an evil when we take our religion for science, our art for nature, and our love as the sure and certain goal of the cosmos. Victory over the cosmos is possible even to men in their madness, provided that they know how to be mad with discipline and to laugh at their own limitations. At least this seems to me to be the central teaching of this wise and penetrating series of dialogues.

But the exasperating difficulties come to the fore as soon as I begin to analyze the notion of madness. What, I am prompted to inquire, is the antithesis to madness? Good and bad, right and wrong, beautiful and ugly, long and short,—these are obvious antitheses. The antithesis to madness is not easy to specify. Indeed I suspect that Santayana was again too preoccupied with moral problems to pose this question to himself. And as I have read the dialogues in repeated efforts to settle this question (which may of course only prove my own madness), I find an alternation between two incompatible answers. Sometimes the antithesis to madness is reason; sometimes it is death.

Madness gives place to reason, the dialogues seem to say, when with Democritus we learn to enjoy legitimate illusions without attributing them to the nature of things. Dionysius was really mad; for when he listened to Democritus invent a liturgy for a newly invented religion, he would at once "account it veritably an ancient mystery."³² But Alcibiades was a convert to reason when he exclaimed: "I like a youngster who falls in love or makes verses because he can't help it!"³³ To recognize the inevitable madness of living is to rise in reason above the deception, and hence to grow in character above the degradation, that make madness a tragedy. If it is natural for animals to be mad, it is the moral privilege of men to be reasonable. Reason recognizes all substance to be ulti-

²⁹ *Scepticism and Animal Faith*, p. vii.

³⁰ *Dialogues in Limbo*, p. 37.

³¹ *Ibid.*, p. 41.

³² *Ibid.*, p. 65.

³³ *Ibid.*, p. 82.

mately material and finds this substance the source of life and madness; and in the training that this rational insight produces, philosophy may escape from superstition and men may become sane.

But again, as soon as Santayana goes beyond morals to theory of knowledge and ontology, equivocation appears. It would seem that there is no cure for madness except death. "Life is at once the quintessence and the sum of madness."³⁴ "Images in sense," just as much as "love in youth, and religion among nations," are a form of madness;³⁵ and "to add thought" to the other motions of substance "is to add madness."³⁶ There is here no choice open to men except to indulge in some fantastic and eccentric madness and to discipline themselves in accord with "normal madness." Sense and thinking are surely the only tools whereby men can hope to surmount the conditions that make for madness; and with the condemnation of these tools, men are doomed to madness as long as they continue to live. To outgrow the petulant folly of rebellion against the inevitable limitation of human nature, to conform with moderation to the institutions of the society to which one belongs, to take all one's opinions as subjective preferences,—to do all this may be wisdom, and to sulk irresponsibly may be folly. But it is not to escape from subjectivity to objectivity: it is not to rise above madness altogether.

Santayana seems to me to be undecided as to which of these theories of madness he would espouse as his own. He wishes to maintain his materialistic faith; he also adopts an epistemological point of view which condemns his materialistic opinions as mad along with all other and alternative opinions. Sometimes he treats illusions of sense as subject to correction by more and different sense-experiences. For example: "To the innocent eye the six stout spokes of a chariot-wheel revolving rapidly are merged and blurred in one whirling disc; but the philosopher, though no less subject than other men to this illusion, on seeing the disc will remember the spokes, and in all his fevers and griefs will be mindful of the atoms; his forced illusions will not deceive him altogether, since he knows their cause."³⁷ But again he generalizes more sweepingly and concludes that all our sense-experiences are as illusive as the vision of the blurred spokes; he denies the possibility of getting from the madness of sense to any foothold in existence that does not involve an inevitable subjectivity of all life. And thereby he undermines the intellectual basis of his own confidence in the being of material substance and reduces his own materialism to the same

³⁴ *Ibid.*, p. 37.

³⁵ *Ibid.*, p. 46.

³⁶ *Ibid.*, p. 41.

³⁷ *Ibid.*, p. 46.

unjustifiable dogmatism as the assertions of the idealists and transcendentalists he denounces and dislikes.

In commenting some years ago on Royce, Santayana wrote (and with perfect justice): "He has not seen his way to any one of the various possibilities about the nature of things, but has remained entangled, sincerely, nobly, and pathetically, in contrary traditions stronger than himself." Something of the same criticism might well be passed on Santayana himself. He is naturalistic in his major persuasions and agnostic in his exclusion of the data of experience from a status in the real or "external" world. These two traditions he does not bring into peace with each other. Hence the constant equivocations that I have seemed to find in the pages of his books. He enjoins on us the life of reason; but he makes reason unable to ascertain the nature of the world in which that life must inevitably occur. He insists that matter is the matrix of life and mind; but he allows life no direct contact with matter except in the reception of various "shocks" and denies to mind the data by which to know that these "shocks" come from matter. He proclaims with firmness that mind arises within nature; but he treats mind as an ontological orphan doomed merely to intuit essences and to guess, without evidence, of existence. Of course he does not do all this constantly; for he is so realistic as often to forget his own sophisticated agnosticism and then to deal empirically with the substances that are the environment of life and the normal subject-matter of much of our human thinking. His own sanity is proof that madness is not as universal as he feigns to believe. His own philosophy reveals that much existence has come directly within the range of his experience. His proneness to irony makes me wonder how seriously he means to maintain that nothing given exists.

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REPORT OF THE CHICAGO MEETING OF THE AMERICAN PHILOSOPHICAL ASSOCIATION¹

CHICAGO insists that there has been a century of progress, if only in the making of Chicagos; and it may have been expected that the members of the three divisions of the American Philosophical Association would gather there to celebrate a century of progress in philosophy. If so, Chicago must have been disappointed. There was not a word about progress in the titles of the

¹ General meeting for the reception of the fourth series of the Paul Carus Foundation Lectures, held in connection with the Thirty-fourth Annual Meeting of the Western Division, September 6-9, 1933, at the University of Chicago.

twenty-three papers and addresses which formed the program. Neither did their contents constitute, in any large number of instances, the sort of report of recent work completed which is customary at the meetings of many other professional organizations. Of course the leisurely pace of philosophical discussion is partly responsible. But, like the Senate of the United States, the Western Division is still hospitable to more discursive utterances than the Eastern Division tolerates. Instead of compact two-thousand-word reports designed to give notice of work done, or to arouse debate upon a limited issue, there were a good many thirty-minute papers on three-hour subjects, most of which sounded as if they had been written to reach the eye through the medium of the printed page, rather than the ear of the hearer. There was also a marked tendency in some instances to begin the paper at a much lower level of presupposition than the audience warranted. This made for a certain conventionality in the run of the daily proceedings, although the extreme heat which prevailed throughout the meetings may have created that illusion. With the permission of the editors, at any rate, this report will abandon the usual attempt to catalogue the contents of all the papers read; but not because of any failure to attend all the sessions, or because of the lack of mimeographed abstracts, or even because of the inaudibility of some of the speakers.

The reputation for excellence which the Carus Lectures have acquired, and the title chosen by Professor Montague for the first of the fourth series, "Philosophy as Vision," brought his audience together in a mood of high expectation. They were not one whit disappointed. The lecturer's eloquent, genial, and persuasive plea for the abandonment by philosophers of the domain of actuality and proof for that of possibility and imagination was admirably suited to an Association gathering. Since it is already available in print, even before its appearance in book form, the reader is strongly urged not to accept this tabloid version of it, but to consult the complete text.¹ There he will find the frank address of a leader to an army whose morale has been shattered by a long series of defeats, or perhaps better, to a disorganized group of individuals who are dazed by a succession of routs. "Disillusionment and a mood of defeatism is making itself felt throughout our entire guild. How can we go on with speculative theories about the constitution of reality when the winds of scientific knowledge in physics, chemistry, biology, and psychology are sweeping around us and covering the once fertile fields of fancy with the arid sands of fact?" It may be that Comte was right, that "metaphysical conceptions are quite as useless and far less exciting than the gods and ghosts of our fathers."

¹ *The International Journal of Ethics*, Vol. XLIV, pp. 1-22 (October, 1933).

None of the plans so far advanced to extricate philosophy from its back-to-the-wall position will do. It is futile to substitute the history of philosophy for the subject itself, and thus "preserve our lives by feeding like cannibal ghouls upon our glorious dead." A wholesale retreat from the field of nature to that of human nature would afford but a temporary respite, until the social scientists "become regular scientists," perhaps in another generation or so. The fashionable strategy of the Cambridge (England) School, which would restrict philosophy to "a determinedly rigorous analysis of experience and its categories," leads to a field of refuge that is "very narrow and pretty dry," and one which is likely before long to be preëmpted by the new metaphysical grammarians in the name of mathematical logic. "In short, as philosophers we appear to be doomed. Province after province of our once mighty empire is being invaded. Natural scientists and social scientists, historians, grammarians, and mathematicians hem us in and perform our one-time business better than we can ourselves perform it. Where can we go and what can we do?"

In answer to his own query, Professor Montague agreed with his colleague Professor Dewey that the first step must be the recognition that the quest for certainty is "the real source of all our trouble." Renounce all claims to knowledge of the *which*, all traffic with proofs about matters of fact; and turn to knowledge of the *what*, the envisagement of "those possibilities which are severely pertinent to the truths already discovered and to the truths that are still to come." Leave to science the quest for certainty; and let philosophy spy out probabilities and significant possibilities in all the far-flung areas of the realm of Being that lie beyond mere existence. Thus to treat philosophy as an enterprise of imaginative vision rather than of rational demonstration is, the lecturer also hinted, to come closest to "the ways of primordial Being" itself, and to partake in the activity of what may be called the World-Imagination.

Now the force of this plea for the curbing of the ancient philosophical lust for rational proof in metaphysics is undeniably great; and Professor Montague's conception of the philosopher of the future as a disciplined visionary is very far from paltry or trivial, as some might hold. But it is a self-denying ordinance nevertheless, and as such it is likely to be most effective as a criticism of past errors. After all, there is an occasional Professor Whitehead in philosophy, whose cosmological speculations can hardly be dismissed as better done by scientists, or classified as pure works of the imagination. One may be as hard on past failures as one pleases, but it is hazardous, to say the least, to attempt to circumscribe in

advance the protean manifestations of the urge to philosophize. It may be doubted whether doctrines of renunciation have ever brought about any appreciable calling-off of the dogs of proof in Western philosophy. They are far more likely to be misinterpreted by neophytes to mean that philosophers do not need to bother to master this or that field of inquiry. It would be a tragic distortion of Professor Montague's plea for vision if it were taken to mean that philosophers may henceforth dispense with a thorough grounding in the sciences.

The second and third lectures made a beginning in the task of summoning supporting evidence from the history of philosophy; and might have had as their common text a statement in the first lecture: "Great in vision, poor in proof, philosophy at its highest has ever been." To the extent that they rehearsed the familiar doctrines of the earlier Greeks, they naturally lacked some of the stirring appeal of the opening address; but to the non-professional members of the audience they furnished a masterly survey of two of the schools of ancient thought, and no one could fail to find delight in the felicity of the phrasing and the subtlety of the interpretations. Turning in his last lecture to "Plato and the Vision of Eternal Things," Professor Montague remarked in passing that the many-sided Athenian appeared to some of our contemporaries as a sort of combination of Walter Pater and Walter Lippmann. After expounding afresh the doctrine of the Ideas, with its vexing uncertainty about the relation of the "mortal adjectives" to the "heavenly substantives," the lecturer concluded that despite the efforts of Aristotle, some meaning still needs to be given to "participation." Rather than bring the forms down into the world of existence, he preferred to invert the Aristotelian solution, and to advance as his own cure for the dualism a doctrine of three world-milieus—Space, Time, and Form, all of the nature of vacuums which may be filled by existing things, and together forming perhaps a single Space-Time-Form continuum. In a provocative section entitled "The City in the Sky," the lecturer went on to discuss "the social uses of eternal things" as tools of revolution, as set forth in the ever-timely pages of the *Republic*; and pointed to some striking resemblances between Plato's ideal sophocracy and the present Russian oligarchy. These two visions, the metaphysical and the social, culminate with Plato in a third, the religious conviction that the claims of the ideal ought to hold, quite apart from dubious proofs from the realm of mortal existence. Professor Montague's guarded but eloquent conclusion that this insight constituted "the single ending of the quest for certainty at its goal" was more moving than convincing in the light of his own earlier warnings.

The Greeks continued to have their innings in the presidential address delivered by Professor M. T. McClure of the University of Illinois. Emphasizing the unity and continuity of Greek thought in contrast to modern dualisms, his scholarly exposition of "The Greek Conception of Nature" was thickly studded with illustrative texts. Nature to the Greeks was life, creative power, soul, and divinity all in one. Aristotle's psychology was what we should call "behavioristic," with no non-natural outside will. *Voluntas* is a Roman notion, not a Greek one; perhaps dualism may have entered philosophy through the Roman-Christian psychology of will. In any event, "modern thought has departed widely from the Aristotelian conception of the essential unity of man and nature. . . . Following Descartes we have given the physicist the exclusive right to define nature, leaving the psychologist and the logician to deal with what the physicist rejected. When this dualism has been rigidly applied, physics has become a skeleton, psychology the miracle of immaculate conception, and symbolic logic a mere menu card. And we say that Aristotle ruined science. Is it not rather that science ruined the great vision of Aristotle?"

At the first of two round tables devoted to a single paper, Professor Lossky of the Russian University in Prague, formerly of the University of Petrograd, expounded briefly the views of a number of Russian religious philosophers who have sought to exalt the concrete individual person above all abstract idea-systems. According to this essentially theological position, individual beings or substantial agents are held to determine the types of existence; but as Professor Montague pointed out, it is difficult at one and the same time to give such agents sufficient aloofness together with any very specific characters. The second round table afforded a hearing to a representative of the Viennese Circle of the New Positivism, Professor Herbert Feigl, now of the State University of Iowa, who offered an integrated version of the teachings of Carnap, Schlick, and Wittgenstein concerning the "dreaded Cartesian tangle" known as the psycho-physical problem, in what they regard as the only permissible form, a "mere analysis of meanings." This was preceded by a comprehensive exposition of the New Positivist distinctions between the various sorts of meanings. The solution of the problem Professor Feigl christened the "double-language view," in which the mental and physical are regarded as two universes of discourse, each possessing a different language into which every fact may be translated. Yet the two syntaxes differ, in spite of complete mutual translatability. It is the confusion of these languages which gives rise to *Scheinprobleme*. The view has obvious affinities with Critical Realism and C. S. Peirce, and lacks a good deal of the

novelty that seemed to be attributed to it. Like all analyses which refrain from attempting to draw conclusions about the structure of reality, it leaves room for such suspicions as that expressed by Professor Weiss, namely, that the necessity for two languages rather points to the existence of two distinct spheres to which they severally apply. Earlier in the program, Professor Weiss had launched an attack upon the New Positivist position in his paper on "Metaphysics: The Domain of Ignorance," in which he argued for the recognition of the dependence of epistemology upon ontology. "That of which we are ignorant is needed for that which we know." We know that we are ignorant, but that knowledge is not, as Professor Feigl held, empirical.

Besides the Greeks and the Logical Positivists, the Pragmatists enjoyed moments in the center of the stage. Upon them two rather abortive assaults were launched, one by Professor Roelofs and one by Professor Baum. But these came after Professor Morris's able paper on "Pragmatism and Metaphysics," in which he strove to demonstrate that an empirical metaphysics was no contradiction in terms, and that the positivistic and realistic strains in pragmatism were compatible. Emphasis was laid upon Mead's doctrines of experience as social, of the importance of "rôle-taking," and of metaphysical thinking as the most generalized form of rôle-taking. The positivist denounces this latter speculative boldness as merely imaginative; while his own position is so cautious that it is sterile. Pragmatism profits by sceptical caution and yet remains metaphysically daring.

It may have been the fault of the thirteen-or-more pragmatists, but few of the pragmatists present were able to recognize themselves as portrayed by either Professor Roelofs or Professor Baum. The latter announced in literalistic fashion the discovery of five absolutes in pragmatic ethics; while the former sought to convict Professor Dewey of having used a definition of feeling which, when its subject-term had been decapitated in a questionnaire, no one empirically recognized as such. Both papers had a point as against the straw defenses which they set up in order to annihilate; but in neither case was the damage proportional to the noise of the bombardment. At the round table on ethics, conducted by Professor T. V. Smith, Professor Chandler of Ohio State called for a greater degree of sophistication than may be found in the classical moralists. "Ethics must outdo the sophisticates at their own game and find criteria of policy sufficiently rational and flexible to fit radically changing circumstances and sufficiently broad to transcend temperamental and class divisions." So completely were the wit and charm of Professor Chandler's paper in tune with his subject, that his hearers were prone to overlook the fact that he provided

no brakes to prevent sophistication from slipping into the extreme scepticism which he, along with extreme naïveté, deplored.

To characterize the dozen or so remaining papers as for the most part specialized treatments of a miscellany of subjects, the great majority of which were well-worth hearing and aroused in some instances vigorous debate, is less of an injustice than to devote a sentence or two to each. On the whole the visitor to school-starved Chicago could not help being struck by the remoteness of most of the papers and discussions from the pressing concerns of American life. On the other hand, no one who listened to the earnest wrestlings of Professor Howard O. Eaton with the problem of "The Social Ethical Implications of Confidence" could fail to be impressed both by his sincerity and the extreme difficulty of bringing philosophic wisdom to bear upon a contemporary social issue. Confidence seemed to many of his hearers a matter of social psychology rather than of ethics, at least until they were told in what they were to be asked to confide.

Too much can not be said in praise of the arrangements made by the officers of the Western Division and the members of the department at the University of Chicago for the comfort and convenience of their guests. They were fortunate in having at their disposal the sumptuous physical equipment of the new International House at the University, where all the activities of the four days were concentrated under one roof. The ease with which everything was accomplished almost completely concealed the large amount of effort which must have gone into the work of organization. The generosity of the members of the Western Division in affording a hearing, both on the program and in the discussions, to so many members of the other divisions should be gratefully remembered. One Easterner, at least, can only regret that more voices were not raised to express the philosophical convictions indigenous to the West, and fewer to echo those of Europe and the Atlantic seaboard.

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BOOK REVIEWS

The Idealistic Argument in Recent British and American Philosophy.
G. WATTS CUNNINGHAM. Century Philosophy Series. New York and London: The Century Co. 1933. Pp. xiii + 547.

This book has a two-fold aim: first, to outline the more important statements of idealism made in America and Great Britain during the past eighty years; second, to classify the arguments in these statements and to sift through them in order to determine their as-

sumptions, difficulties, and worth. Cunningham is convinced that an irrefrangible truth is contained in one type of idealistic argument, the argument *a contingentia mundi*. But the attempt to develop the truth in this argument into a constructive solution of philosophical problems is not undertaken in the present volume. This book is a prolegomenon to such an undertaking, a clearing of the ground (p. x).

The book, accordingly, has two parts. Part I (pp. 17-337) is expository. An introduction (pp. 3-17), treating briefly of Locke, Berkeley, Hume, Reid, and Hamilton, prepares the way for an outline of the views of J. F. Ferrier. After Ferrier, the positions of Green, Grote, Bradley, Bosanquet, Pringle-Pattison, Ward, McTaggart, Haldane, Royce, Creighton, Howison, and Bowne are expounded in order. The exposition proceeds by quotation from and paraphrase of the writings of the idealist whose views are being presented. The result is a series of very authentic summaries which often read like abridged statements by the idealists themselves. No doubt, special students of these men (of Bradley, or of Royce, say) will carp over certain omissions, inclusions, or emphases in Cunningham's presentations. It seems to me, however, that Cunningham's exposition as a whole, which is written with great simplicity and lucidity, is a very fine and a very successful piece of historical reporting. No living idealist is presented, but the line had to be drawn somewhere (p. viii).

Part II (pp. 337-547) is critical. The first chapter of this part outlines the types of idealistic argument and the underlying issues. It defines idealism itself as "that philosophical doctrine which undertakes to show that, in order to think matter or the spatio-temporal order of events in its ultimate nature, we are logically compelled to think mind or spirit along with it as in some sense foundational to it" (p. 339). The types of idealistic argument are said to be three: the epistemological argument, the ontological argument, and the argument *a contingentia mundi*. The underlying issues are four: the problem of continuity in nature, the problem of the intelligibility of nature, the problem of individuality, and the problem of the intelligibility of the Absolute (pp. 344-345). Since these issues are understood as underlying the differences between the various idealists and are treated by Cunningham in the light of the family quarrels they have provoked among the brethren, not as affecting the general validity of idealism itself, I will not enter into Cunningham's discussion of them, but merely mention that in the final chapter of Part II Cunningham makes a reasonable but somewhat indecisive attempt to straighten accounts and iron out differences.

The idealistic argument, then, is three arguments: the epistemological, the ontological, and the argument *a contingentia mundi*. The epistemological argument seeks to show that "the ultimate implication of the fact of knowledge is a sentient world" (p. 339). It proceeds "through the supposed logical impossibility of the world's existing out of relation to a conceiving mind, or of not being thought" (p. 339). This type of argument is advocated chiefly by Ferrier, Green, Ward, Howison, and Bowne. The outcome of the argument, according to Cunningham, is solipsism. The basic defect of the argument is its denial of transcendence in the object of knowledge: "this transcendence must be denied, or at least overlooked, if one is to hold in dead earnest that the thesis, 'to be is to be known,' can be logically founded on the cognitive situation" (p. 352). But the denial of transcendence together with this thesis means that an object can be nothing except for the subject whose knowing of it has proved that it must be known (p. 352). And this is solipsism, and solipsism is indefensible if only because it makes impossible and inexplicable the fact of the development and corrigibility of knowledge itself (p. 377).

The ontological argument, which is McTaggart's, endeavors to start from indisputable certainty and to proceed *a priori* through indisputable steps to the general idealistic conclusion that nothing exists but spirit. It undertakes to establish idealism by a chain of strictly deductive proof hanging from necessary propositions (p. 340). This argument, Cunningham finds, also breaks down. McTaggart's main theses are four: every substance must have a sufficient description, every substance is infinitely divisible into substances, the principle of determining correspondence must obtain within substance, and spirit is the only known substance within which this principle obtains (p. 460). In an extremely excellent critical analysis of the proofs of these theses, Cunningham endeavors to show that no one of the theses is established with indisputable certainty, indeed that no one of them except the first (and this with qualification) may be said to be established at all (pp. 460-501). Cunningham praises the great clarity, the suggestiveness of detail, and the analytic acumen in McTaggart's writings, but his opinion of McTaggart's *a priori* method is similar to this opinion of McTaggart's proofs: "His general method seems to me impossible of application, even at his own hands. His analyses appear to be carried forward, where they are consistently developed, largely through more or less arbitrary definitions; and the primary reason why these definitions are not wholly arbitrary is that, in violation of his avowed method of procedure, he from time to time (not merely in the two instances which he acknowledges) appeals to empirical

considerations as the basis of his formulation of them. His failure to recognize this appeal is responsible for his assumption that the method possesses a character of apriority and 'necessity' which in fact it does not possess. Furthermore, the argument clearly breaks down at crucial points, unless the 'ontological' method is explicitly disavowed" (p. 500).

The argument *a contingentia mundi*, advanced by Grote, Creighton, Bradley, Bosanquet, Royce, Pringle-Pattison, Haldane, is, in Cunningham's opinion, the best of the three arguments. This argument, which is based on transcendence in the object of knowledge, is the "inference from the imperfection of data and premisses" (p. 339). The common emphasis of its advocates is "upon the self-transcendence of experience and knowledge. More fully expressed, it is upon the doctrine that experience in all of its forms is in contact with an order which reaches beyond, that this contact is of such a nature as to imply something about both experience itself and the surrounding order, and that a reading of this implicative attachment may give us an answer to the problem of reality" (p. 381). The developments of this argument by Bradley, Bosanquet, and Royce, are singled out for separate analysis because in their formulations the argument "has received its classic statement" (p. 381).

To summarize the results: critical analysis of Bradley's formulation forces us to grant that reality is in some sense "given" in immediate experience; that, consequently, reality is that which satisfies the demands of that experience as elaborated through relational experience; and that reality is therefore coherent and systematic. On the other hand, it does not force us to allow that the characters of sentience ("or mind" p. 382), supra-relational structure, and "substantial" wholeness are features of reality, and these may be set aside as not proved (p. 407). Analysis of Bosanquet's formulation adds nothing to this result, so far as fundamentals go (pp. 409-410). Yet certain emphases require comment. Bosanquet's interpretation of intelligence as inclusive of evaluation involves an insidious methodological danger (p. 412), yet is justifiable (p. 415). Still, his conception of teleology stretches "the meaning of the word beyond recognition" (p. 421), and his attribution of negativity to the Absolute, whilst of profound importance as a ground of explanation of appearance and reality, means, if held tenaciously as it should be but is not by Bosanquet (p. 426), that the Absolute is a relational system, which result would involve a complete reversal of Bosanquet's views "in respect of both its 'sentience' and its all-inclusiveness" (p. 427). Royce places unwarranted emphasis upon the alleged logical priority of internal over external meanings, but,

even if this emphasis is allowed, the transition to an Eternal Consciousness, or an all-inclusive whole of meaning, is not justified (pp. 450-451).

Put more inclusively and pointedly, Cunningham's discussion of the argument *a contingentia mundi* amounts to this: transcendence in the object of knowledge, the fragmentariness and "contingency" of experience as emphasized in this argument, is not to be questioned, but every transition in the classic formulations from this contingency and transcendence to a doctrine of reality as sentience or as mind or as all-inclusive meaning or as Eternal Consciousness is unjustified. I take it that this means that the third argument for idealism, as an argument for idealism, is no more conclusive than the other two. For transcendence in itself certainly does not establish idealism. All that transcendence establishes, precisely, is that to know, really know, one must always pass beyond the first glance; mind, active inferential mind, is always foundational and necessary for genuine *knowledge* of any situation. But surely this is as consonant with the belief that the situation itself (including knowing mind in it) is foundationally non-mental, as it is with the belief that the situation is foundationally mental. And even if one interprets mind to mean, not active inferential process but epistemological content (meaning), and grant that such content is always tied into any situation which as a matter of fact we can call real (p. 544), it is still possible to hold that "mind" is but an epidermis spread widely but thinly over the situation, and not reality's bone and deep tissue.

The intent of Cunningham's book, of course, is not to establish or even to make plausible the idealistic metaphysics, but to bring home some of the vast content of this great movement, to expound some of its latest variations, and to organize these into types of argument which might be evaluated with some precision. And all this, as it seems to me, is done most admirably. Still, one can not forego the observation that if Cunningham intends later to build *purely* and *simply* on the truth in the argument *a contingentia mundi* (viz., transcendence in the object of knowledge, or the contingency of the first glance), the result will not be idealism.

In this sense, Cunningham's volume is not only a statement of the conclusions of the dead, but a statement that their conclusion is dead, at least so far as metaphysics goes.

D. W. GOTSHALK.

UNIVERSITY OF ILLINOIS.

God in Idea and Experience. An Epistemological Study in the *a priori* Elements of the Religious Consciousness. REES GRIFFITHS. Edinburgh: T. and T. Clark. 1931. Pp. xiv + 300.

Dr. Griffiths' essay is an epistemological study of the religious experience, presupposing competent knowledge of recent psychology and modern anthropology. He affirms that religion is inherently natural to man. To discover these *a priori* elements of the religious consciousness and to reveal the essence of the primary religious datum which is formulated in what the author calls the gnotic principle constitute the author's purpose. The failure of Kant to discover the *a priori*, that is, universal and necessary character of religion as he did in science, morality, and art has, since his time, created the chief problem of the philosophy of religion for which this volume offers one solution. "Apriorism in religion means, then, that religion is derived from science, morality, and art" (p. 59). Consequently, the theory of religion as ideal construction has denied religion uniqueness and autonomy and has compelled it to accept the position of an inferred hypothesis derived *ex-hypothesi* from orders of experience non-religious in character. Thus "God is this idea which we have formed as an hypothesis to explain our experience" (p. 75). As a protest against this way of handling religion, we are to discover within concrete religious experience Ultimate Reality or God as intuitively and immediately given.

This is the source of the religious imperative or *a priori* and of that necessity which requires man to relate himself to and come to terms with his spiritual environment in exactly the same way in which he must reckon with the physical, moral, and esthetic environments. This categorical character of religious experience requires the idea of God to be a constitutive element of human experience and not merely regulative. Likewise, "all the great ideas that are characteristic of religion, together with religious emotion, are not derived or inferred" (p. 290). As an epistemological principle of knowledge, the religious *a priori* is transcendent and therefore bridges the dualism of the critical philosophy because the religious consciousness possesses both worlds within its unity, that is, "the awareness of an Other Self who knows me in all my knowing" (p. 208). This is the meaning of the gnotic principle, that the religious *a priori* is logically prior to the rational, moral, and esthetic, comprehending and founding all activities of human thought and evaluation in the religious consciousness. "The religious principle becomes the root of all the categories, and God, as an intelligent and Infinite Being, the ultimate Subject of all predication" (p. 291).

Two classes of criticisms will no doubt be made; some will find too much content accorded to the religious *a priori* as contrasted

with Troeltsch and R. Otto, while others will protest that it includes too little. The work is a contribution meriting thoughtful consideration.

CARROLL D. W. HILDEBRAND.

DEPAUW UNIVERSITY.

Christianity and Philosophy. D. MIALl EDWARDS. Edinburgh: T. and T. Clark. 1932. Pp. xv + 367.

Dr. Edwards' book recognizes the relation between philosophy and religion as necessary and not accidental. Christianity is not a philosophy, it is first and last a religion, but a religion forever in quest of an adequate philosophy. In the course of its history, it has made use of at least five great philosophies. In their order, Platonism, Aristotelianism, Cartesianism, and Berkeleianism have served this purpose and, according to Professor Edwards, "We hope that we may be able to find such a philosophy in a form of 'personal idealism' " which shall furnish to-day a satisfactory interpretation of our total experience including our intellectual demands and our Christian convictions. Despite the cross-currents in both contemporary philosophy and religion, the philosophical basis of religion and the theological aspects of philosophy make it clear that Christianity can avoid philosophy only at "the peril of drifting into backwaters of obscurantism and subjectivity, . . ." (p. 6. Cf. pp. 206-207).

He confines philosophy to metaphysics or "the study of ultimate reality" and the method employed is "constructive criticism" while "organic coherence within the totality of experience is really our ultimate criterion of truth" (p. 36). Since philosophy must include a synoptic interpretation of experience, it must include religious experience which is "the apprehension of the Supreme Reality under the form of worth or value" (p. 40). Like Dr. Griffiths, Dr. Edwards argues the "uniqueness" of religious values in criticism of Kant, Fichte, and Hegel. They are further agreed in criticism of Otto that "the Holy" is not merely one *a priori*, co-equal and co-existing with others like those of science, morality, and esthetics, but "the common plasm from which all the other values are differentiated, the matrix from which they are derived, their common *fons et origo*" (p. 55).

Naturalism as a philosophical theory is not demanded by science and, if triumphant, it would destroy the spiritual life and cancel the objectivity of value. On the contrary, the structure of the universe yielded by recent physics points toward freedom, teleology, and the objectivity of value. Personal idealism finds a place for the Christian conception of both God and man, and furthermore, a

place for them as set forth in the experience, personality, teaching, and work of Jesus Christ together with that of his followers. The philosophical interpretation of the problem of the relation of the divine and human in Christ is "that affirmations about Christ are affirmations about God, the Ultimate Reality" (p. 333). This, in fact, justifies the view that the Christian Trinity is an attempt in modern theology to understand God "as supremely manifested to men in the historical person Jesus Christ" (p. 358). Thus, "the higher anthropomorphism" ends with "the *highest* anthropomorphism, Christomorphism" expressed in terms of "a personal idealism" which we believe is acceptable to the best thought of our day in this field.

CARROLL D. W. HILDEBRAND.

DEPAUW UNIVERSITY.

JOURNALS AND NEW BOOKS

PHILOSOPHISCHE HEFTE. IV Jahrgang, Heft 1/2. Versuch einer Kulturgenealogie: *Maximilian Beck*. Über die Bedeutung der Ganzheitsbetrachtung in der heutigen Biologie: *Hans André*. Das objektive Rangordnungsprinzip in der Biologie: *Armin Müller*.

ARCHIVES DE PHILOSOPHIE. Vol. X, Cahier II. Supplément Bibliographique No. 2. Paris: Gabriel Beauchesne & ses Fils. 1933. Pp. 35-65 incl.

Borkowski, Stanislaus von Dunin: Aus den Tagen Spinozas. Geschehnisse, Gestalten, Gedankenwelt. Erster Teil: Das Entscheidungsjahr 1657. Munster i.W.: Druck und Verlag der Aschenдорffschen Verlagsbuchhandlung. 1933. 495 s. 20 R.M.

Bremond, André: Le Dilemme Aristotélicien. (Archives de Philosophie, Vol. X, Cahier II.) Paris: Gabriel Beauchesne & ses Fils. 1933. 153 pp.

Dasgupta, Surendranath: Indian Idealism. Cambridge: At the University Press. 1933. xxiii + 206 pp. \$3.00.

Heidel, William Arthur: The Heroic Age of Science. The Conception, Ideals and Methods of Science among the Ancient Greeks. (Published for Carnegie Institution of Washington by Williams & Wilkins Co., Baltimore. 1933. (Publication No. 442.) vii + 203 pp. \$2.50.

Major, David R.: An Introduction to Philosophy. Garden City, N. Y.: Doubleday, Doran & Co., Inc. 1933. vii + 495 pp. \$2.00.

Metzger, Arnold: Phänomenologie und Metaphysik. Das Problem des Relativismus und seiner Überwindung. Halle a. Saale: Max Niemeyer. 1933. xvi + 269 pp. 9 M.

Radin, Paul: The Method and Theory of Ethnology. An Essay

in Criticism. New York: McGraw-Hill Book Co., Inc. 1933. xv + 278 pp. \$2.50.

Hull, Clark L.: Hypnosis and Suggestibility. (Century Psychology Series.) New York: D. Appleton-Century Co. 1933. xii + 416 pp. \$3.75.

Perry, Charles M.: Henry Philip Tappan: Philosopher and University President. Ann Arbor: University of Michigan Press. 1933. xi + 475 pp.

NOTES AND NEWS

We print the Preliminary Announcement of the Thirty-Third Annual Meeting of the Eastern Division of the American Philosophical Association:

The 1933 meeting of the Eastern Division of the American Philosophical Association will be held at Amherst College, Amherst, Massachusetts, Thursday to Saturday, December 28th to 30th.

One session will be devoted to a symposium by specially invited speakers. At the other three sessions, unsolicited papers by members of the Association to the number of not more than three at each session will be included. By action of the Executive Committee, papers must be selected with the following considerations in mind:

"(1) Scholarly statement from the standpoint of accuracy and originality; (2) length not exceeding two thousand words; (3) form, style and manner of treatment suitable for presentation to, and discussion by, members of the Division." Any member who desires to contribute is asked to send to the Secretary before November 15th a 200-300 word abstract of his proposed paper, suitable for consideration by the Program Committee, and for mimeographing for distribution at the meeting.

Local arrangements at Amherst will be in charge of a committee of which Professor Sterling P. Lamprecht is chairman. An announcement to be issued early in December will give further details.

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THE JOURNAL OF PHILOSOPHY

DUALISM AND THE PARADOX OF REFERENCE

I

MR. STRONG'S friendly invitation to reply to his article "The Missing Link in Epistemology"¹ is one which it is impossible to decline. For its source justifies the hope that further discussion of the issues raised will be fruitful; and the issues themselves are important. Even in criticism and controversy Mr. Strong maintains in a rare degree the attitude of open-minded inquiry, so that one is assured that any presentation of considerations adverse to a thesis which he has advanced will be fairly and discriminatingly weighed. And in the present case the possibility of mutual understanding should be at its greatest because the discussion starts from common premises explicitly stated. There are certain fundamental propositions in epistemology which we both regard as established: "that the datum is distinct in its being from the *cognoscendum*"; that it is a particular, not a universal; and that "the givenness of the datum is not the whole of cognition, but there is more, a more in some sense conscious or mental, which requires to be explained—namely, reference to a real thing, and use of the datum to represent the real thing." In Mr. Strong's terminology, the former is called "indication" and the latter "depiction." Beyond this point, however, a difference of opinion arises; and it relates to an apparent difficulty which it is essential to solve in order that these dualistic premises themselves may be made fully intelligible, and acceptable to those to whom that difficulty appears insuperable. Dualism "seems to . . . involve a breach between datum and object known" or referred to; it nevertheless maintains that by means of the datum an object distinct from it *can* be referred to and known. It is therefore incumbent upon the dualist to show *how* this can be, and is, done—in Mr. Strong's words, to "repair the breach." The problem, then, is "to explain"—in a manner consistent with the essentials of the dualistic view—"how indication and depiction are effected." Concerning the solution of this problem Mr. Strong and I hold "rival theories"; the purpose of the discussion, then, is to determine which (if either) is tenable.

¹ This JOURNAL, Vol. XXIX (1932), pp. 673-687, hereafter cited as *ML*.

This statement of the issue is not, I think, wholly free from ambiguity. It is not clear to me precisely what is meant by the terms "explained" and "effected." Three questions are distinguishable. (1) What is actually present to consciousness when the experience of "referring to" an object as "real" or "not-given" occurs? (2) What justification can be offered for the belief that there is a "real thing distinct from the datum," when it is held, as the dualist holds, that real things "are incapable of being given"?² (3) What are the conditions, physical, physiological, and psychological, which are causally prerequisite to the production of the experience of "referring to" a real thing not itself given in that experience? These may be called the analytical or descriptive, the metaphysical, and the genetic questions concerning reference. I get, perhaps mistakenly, the impression that Mr. Strong's discussion relates sometimes to one, sometimes to another of these issues. When he describes his theory as a way of "repairing the breach between datum and object," it would seem to be with the second question that he is dealing. When he sets forth his "sensori-motor theory of perception," he seems to be offering an answer to the third question. But if his theory is a "rival" to that which I have presented in the passages which he cites and discusses, it must be intended as an answer to the first question; for it is to that question, and not to either of the others, that those passages relate.³ It is true that I have elsewhere propounded some arguments pertinent to question (2) (*RD*, Chap. VIII), but it does not appear that Mr. Strong dissents from these.

It will make what follows clearer if at this point I formulate the first question and my answer to it somewhat more fully and precisely than I have hitherto done in print. A few postulates and definitions must first be made explicit. Every actual experience, cognitive or other, in the life-history of a conscious individual has, I assume, existential limits, beyond which may conceivably lie other existences. Any existent, i.e., any object or event, which in fact lies beyond those limits is said to be "transcendent" with respect to that experience; anything which is *apprehended* as existing beyond those limits—whether it in fact does so or not—is called a "transcendent referent," or more briefly, "a referent." A "referential experience" is any experience in which something is consciously apprehended by a subject *as*—or *as if*—transcendent, i.e., as a referent. The limits of the content—of what is given—in a particular mental event, of this or any other kind, are of three sorts,

² *ML*, p. 674.

³ The passages in question are specified by Mr. Strong (*ML*, pp. 674–675) as "the final chapter in *The Revolt against Dualism*" (here referred to as *RD*) and part of an article in this *JOURNAL*, Vol. XXIX, especially p. 353.

which may be called experiential, personal, and temporal: i.e., the content (a) is given, it is *in experience*; (b) it is in *my* experience; (c) it is in my *present* experience. (The temporal limits of "the present" as here used may be, but need not be, those of the specious present; the present may be any period of time during which a subject is continuously apprehending an object or event as not existent within that period.) Corresponding by contrast to these three modes of limitation there are three corresponding general "realms of transcendent reference," and therefore three genera of conceivable referents, which it is more convenient to enumerate in the reverse order: (I) contents of my experience, but not of *my* present experience, the negative counterpart of (c); in other words, contents of my past or future experience. (II) contents of experience but not of my experience, i.e., items in the experience of other conscious beings, the negative counterpart of (b); (III) objects or events which exist (or occur) but are not, at the time at which they exist, contents of the experience of any subject: in short the realm (rejected by the idealist) of metempirical reality, the negative counterpart of (a). The division into present, past, and future may, of course, be applied in realms II and III as well as I; the total number of "regions of existence" is therefore nine, namely: (1) that of my present experience; (2) my past experience (which may, of course, be conceived as temporally subdivided further *ad indefinitum*); (3) my future experience; (4) the present experience of other subjects; (5) their past experience; (6) their future experience; (7) present extra-experiential objects or events; (8) past extra-experiential objects or events; (9) future extra-experiential objects or events.⁴ Region 1 is that within which all that is immediately and indubitably given in any referential experience has its existence; the eight others are, of course, transcendent.⁵

⁴ To avoid a complication not relevant to the present discussion I omit a tenth conceivable region, that of non-temporal extra-experiential objects, i.e., subsistents.

⁵ The order of enumeration of "realms" corresponds broadly to the number of kinds of philosophers who admit the types of reference mentioned. All philosophers (except the "solipsist of the specious present," if there be such a creature) admit, implicitly or explicitly, the possibility of transcendent reference of type I (i.e., to their own not-present experiences). All philosophers, idealistic or realistic, except the solipsist (if he exists) admit the possibility of type II, commonly called "knowledge of other minds." Only realists admit type III; though here the position of the monistic realist is somewhat equivocal. The list of "realms" and "regions" is sufficiently obvious; it is none the less worth while to set it down explicitly and systematically, in order that the full range of modes of reference, and at the same time their generic identity—the fact that the admission of *any one* of the eight establishes the general possibility and actuality of the awareness of the not-given—may be borne in mind by the reader. The most general modes of reference, corresponding to the three "realms," may be called transtemporal, transpersonal, and transexperiential.

Referring is not the same event as knowing, but all knowing includes reference. This statement is primarily a definition; it means that the term "knowing" is here used, not in the sense of the simple contemplation or "enjoyment" of immediate data, but in the sense of the awareness of objects as existent beyond the temporal or the personal or the experiential limits of the particular cognitive event and as not owing their existence or character to the occurrence of that event.⁶ The statement is, however, intended also to convey something more than a definition, viz., that without such transcendent reference we should never suppose ourselves to be acquainted with anything except our private and momentary content of consciousness—and, at the same time, should not even recognize it as private and momentary, for want of the notion of anything anti-thetic to that status. Our experience would not introduce us, or even seem to introduce us, to a world, but only to ourselves; and we should not be aware that it was doing even this.

I am not, however, concerned in this paper to give reasons for believing that some referential experiences *are* cognitive in the eulogistic sense, that they make us acquainted with something more than their own content. I am concerned with what I have called the first question: assuming that reference (in one mode or another) actually takes place, *how* does it take place? What are the differentiating components of that type of conscious event in which a subject whose then actual experience consists wholly of contents (and an awareness of them) lying within region 1, nevertheless apprehends something as beyond that region? The answer to this, I suggest—an answer which will seem to some tautological and to others paradoxical—is, in brief, that there must be, among those components, some presentation, however vague, of a distinction, a relation of mutual externality, between the present datum and the referent—some element in the given content which makes possible a contrast between all the given content and that which lies beyond its boundaries. This answer may be described as an account of the way in which "indication and depiction" are "effected," provided it be understood that "effected" here means neither logically validated nor causally preconditioned, but psychologically constituted.

This answer sounds tautological because it says simply that when (as is admitted, at least by Mr. Strong, to be possible) we have the experience of referring to an object as transcendent—we *do* refer to it as transcendent. The answer sounds paradoxical because it says that none of the psychological components of the experience

⁶ This distinction, which is in any case elementary, has, I trust, been sufficiently fully defined in "Dualisms Good and Bad," this JOURNAL, Vol. XXIX (1932), pp. 343-344.

of transcendent reference are themselves transcendent. The apparent tautology and the apparent paradox are different ways of expressing the same proposition; and that proposition is better described as a tautology. It is a proposition derived directly from a definition—but from a definition which at the same time purports to be a description of a class of events that empirically occur. It either is or is not the case that every experience of a human being is limited in the three ways already mentioned. It either is or is not the case that some of those experiences correspond to the definition, above given, of a referential experience. If both are the case, the supposed paradox must be simply an account of the actual character of a certain species of natural events; and what Mr. Strong calls my “theory” does no more than make the nature of this event explicit. If I were to resort to the usually reprehensible and misleading practice of expressing philosophical theses in the form of metaphors or analogies, I should say that the theory in question means that we can see beyond the fences which surround every finite cognitive event without jumping over the fences, and points out the way in which this is, and the only way in which it could be, accomplished. I can understand how those extreme philosophical sceptics who profess to hold that we can’t see beyond *any* of the fences—that referential experiences never occur—can reject my description. I find it difficult to understand how those who, like Mr. Strong, hold that they occur can reject it.

It is true that this analysis of a referential experience can be drawn out in more detail; but to do this is simply to make still more fully explicit what is implicit in the brief proposition already set down, and therefore to describe more clearly the nature of that type of every-day event. While all that constitutes, and is given in, transcendent reference lies wholly in region 1, it must nevertheless be the sort of thing that provides a reference to an object *as* transcendent. What is there, then, in the experience which can and does perform this function? How, in other words, does that which is not in fact now experienced by me nevertheless now get presented—and presented *as* not itself now experienced by me? The seeming paradox of reference takes on its most acute form when the question is put in this way; for the question has often been regarded by philosophers as manifestly self-contradictory. It has seemed to them to imply that a given object at one and the same moment is presented and is not presented, or that the subject stands, so to say, both inside and outside the fence which confines his present experience. But those who recognize that this kind of event really happens must hold that there is no contradiction about it; and they must therefore answer the question—

in non-contradictory terms. This answer, I have maintained, is furnished by the referential experience itself. We have but to observe closely what goes on in it, and the supposed contradiction disappears. If I now think (erroneously or otherwise) of a carnivorous dinosaur of the Triassic period as probably having had a pleasure-sensation when devouring a smaller creature, I evidently am now experiencing some sort of present content which enables me to think of the dinosaur as existing in that period and not now, and as having then had a sensation of pleasure which I do not share—the thought of it being in fact to me the reverse of pleasurable. And this means that a part of this present experience of mine consists of a non-sensory element, namely, of what I have called a conceptual schema of relations of mutual existential externality. In different positions in this schema the various other elements of my present content are experienced as situated. The Triassic period is being conceived by me as external to the present, and the dinosaur's feelings as external to my feelings; but the elements in the experience *whereby* I conceive the date and feelings of the dinosaur as external to my present content are not in fact—and are not, if I stop to ask myself the question at all, conceived by me as being—external to that content. To employ the traditional philosophical term, the category of transcendence is one of the formal constitutive factors in an experience of this kind; but, as given in the experience, as a relational datum, that category does not have the character which it signifies; it is not itself transcendent. It is this fact which makes, not merely error, but the *idea* of error, possible. When I say to myself, "I am perhaps wrong about the dinosaur's feelings and even about its real existence," I am saying that, though I am thinking of its feelings and existence as existentially external to mine, my so thinking of it is not the same as its actual externality; and I am implying that if it *were* the same I could not be wrong and that, in fact, the dinosaur and its sensations would not be external: they would be my immediate and indubitable data.

This account of the nature of the event of referring could be amplified by further elaboration of its implications. But I shall not go into these here, for I must now pass to an examination of Mr. Strong's arguments. They appear to be intended to show that the account of this phenomenon which I have given is untenable, and to present a satisfactory alternative. They do not, however, have to do with the nature of referential experience in general, but are concerned with the two special cases of memory and visual perception.

Memory.—The question with which Mr. Strong here deals is primarily one of introspective psychology. He proffers an account

of what is introspectibly present for awareness in "naïve memory," in contrast with interpretations reached through reflection about memory; and he thinks that I have confused the latter with the former. Reflection, of course, shows that the image is present and that the remembered event is past. But "the naïve rememberer is not aware that his image is a present existent. From the first moment of the image appearing it is given to him as lying in the past. The image is not given to him as an entity distinct from the event remembered. It is given as being that event. . . . The present antithesis between the now and the then . . . is not a fact in naïve memory." ⁷

If Mr. Strong means this literally, I can only infer that what he calls "memory" is a mental phenomenon quite unlike that which I call by that name. When I remember, a consciousness of "the antithesis between the now and the then" is of the essence of the experience. I have as the content of my awareness when, e.g., I remember yesterday's dinner, certain images, of food, dishes, a table, etc.; and I am very clearly conscious that these images are now present to me. Nothing can be more glaringly present than now-given content, whether imaginal or sensory. It is the dinner, not the image of it, that I am apprehending as past. And "past" has a meaning for me; it has, in the first place, the negative meaning "not-present." The concept, in short, is relational or, to use a less ambiguous term, "respective." It may be that Mr. Strong is able to frame the notion of a "past" which is not past in relation to anything else, of a "then" quite uncontaminated by any contrast with a "now." But for me, I must confess, this feat is impossible; and I am constrained to doubt whether it is possible for anybody. It is, of course, possible to use the word "past" as a parrot might, without attaching any meaning to it; but I assume that even a naïve rememberer is not a parrot, that for him too the word has a meaning. And I assume that the meaning is the same for him—and, in reality, for Mr. Strong—as it is for me.

If it is, the naïve rememberer has present to his consciousness, as an element in the memory-experience, a temporal distinction. If he did not, there would be no difference between the experiences of memory and hallucination. If he puts what he remembers into words he uses the past tense: "the dinner *was* a four-course dinner"; and he does so because he distinguishes "was" from "is." In the terminology which I have used above, he discriminates two "regions of existence." He makes this distinction now, at the moment of remembering; which is to say that the vehicle of the distinction is a part of his present content. But the distinction is

⁷ *ML*, pp. 676-677.

nevertheless a distinction between "now" and one of the two kinds of "not-now," viz., "past." The naïve rememberer, then—if he is really a rememberer and not a paranoiac—is having an experience of the "referential" kind, as I have previously defined that term: he is apprehending an event as lying in a transcendent region, namely, in his own past experience (region 2). For its pastness, in so far as that is now presented in his awareness, consists in its being thought as existing in a time other than that in which he is now remembering—i.e., now having before him such and such content. The "now" does not—if he is truly naïve—mean for him a clock-reading or a date on a calendar; it means the experienced immediacy of his actually given content. The "not-now" means the negation of this—the status of not being thus immediately given. Once more, the idea of not-now is immediately given, along with the qualitative characters of the image; but it is an idea of not-being-so-given. The idea is, in memory, applied to certain characters which nevertheless *are* immediately given, since they constitute the image. There is, then, to sum up, no remembering where there is no apprehended temporal distinction of past and present; there is no apprehended temporal distinction of past and present where such distinction is not *present*, at the moment of remembering, as an element in the given content; and therefore there is no remembering where there is not present as such an element at least the simplest form of a conceptual schema of relations of mutual externality of times of existence. I am not, of course, saying that naïve rememberers describe their experience to themselves in these ponderous terms. When one describes an event, physical or mental, one does not imply that the verbal description is a part of the event. But I think that the terms I have used correctly describe the event commonly called "remembering," and that Mr. Strong's description leaves out precisely what is distinctive of that event.

Nevertheless, I can not but wish to make intelligible to myself how it is that so acute an analyst as Mr. Strong rejects the description which seems to me so evidently correct; and a possible explanation occurs to me. It is that he supposes that that description asserts or implies that when I remember I am attending to *two* objects, have before me two sets of imaginal data. But this is not the view which I hold; and if anything I have previously written suggests that it is, I have failed to make my meaning clear. When I remember yesterday's dinner, there is certainly some kind of duality involved, since the dinner is thought as past and the image is plainly present, and since, also, the pastness ascribed to the dinner gets its meaning from an apprehended contrast with the presentness of the image (and of whatever sensory or other content may be

compresent with it). But there are not two presentations of dinner-like content. There is just the one dinner-image which, at one and the same time, I recognize as present and locate in that region of my temporal schema which is, so to say, labelled "the past," though it is not past. The characters which make up the image are given as present, and they are referred to the past—to a past thought as external to that same present, and therefore mediated for awareness by its antithesis to the present. They have a felt nowness and a conceived or imputed by-goneness. And there is no contradiction between these two properties, for they coexist in the actual experience. Their conjunction merely illustrates what I have described as the generic peculiarity of referential experience—that in it there is, *within* region 1 ("my present experience") a conceptual distinction *between* what is within and what is beyond the limits of that region—i.e., I, what is not present, or, III, what is not experience, or, II, what is experience not mine. If we were not in fact, while limited to region 1, able consciously to contrast it with I, we should never be able to remember—to think of an event in our own lives as having occurred but not now occurring. If we were not able consciously to contrast region 1 with III, there could be no realistic philosophers. And if we were not able consciously to contrast region 1 with II, we should all be solipsists—naturally, *sans le savoir*.

But even if Mr. Strong has correctly described "naïve" memory, his description is irrelevant to the question of the nature of referential experience. For remembering, as he describes it, would not be such an experience. There would be in it no distinguishing of past from present, and therefore no apprehension of a "beyond." Meanwhile there admittedly remain other phenomena of consciousness in which referring takes place; and it is upon these that our inquiry should be directed. There even remains, it appears to be admitted, a kind of memory that is not so naïve, and to which my description applies: "undoubtedly, when we think of an event that happened 'last year' or 'yesterday,' this *implies* a relation to the present—a schema, if you like, of temporal relations."⁸ But at this point Mr. Strong shifts from the analytic to the genetic problem: "Whence did we get this schema? We were not born with it." He offers an explanation of our acquisition of it. We have a thousand times "passed from yesterday to today, and remembered yesterday—in more or less concrete terms." The schema is a "residue left behind by innumerable memories"; hence, "memory can not be explained by conceiving," i.e., by the apprehension of such a schema, "but conceiving has to be explained by memory." But how, I ask, can the concept "past"—e.g., the consciousness of the

⁸ *ML*, p. 678.

yesterday-today antithesis—be “explained” by previous memories, if each of those memories contained a consciousness of that same antithesis, as it obviously and admittedly did if we *consciously* passed from yesterday to today? It is Mr. Strong, not I, who circuitously accounts for memory by saying: “How do we remember? By using the residues of other memories.” My own answer to the genetic question is that the schema is a pure emergent and therefore, strictly speaking, can not be “explained.” Doubtless it has antecedent physiological conditions; before we could begin—apparently at some time in our infancy—to be aware of it, certain neuro-cerebral structures were prerequisite. But that these structures, or the transfers of energy between their parts, give rise to the apprehension of a temporal distinction of past and present is simply an empirical fact, which can be recognized but not accounted for. There is no more general law of which it can be regarded as a special case. The neural and cortical processes do not themselves constitute the mental event which they condition; for (a) we are not, when remembering, conscious of *them* at all, and (b) in any case, these antecedents, as defined in physiological terms, do not have the character of that which they engender. It seems to me evident, therefore, that we must precisely reverse Mr. Strong’s remark “that from the very first occasion on which we remembered an event”—that is, thought of it as past—“the past event must have been made present to us in some other way than by our using a conceptual schema.” In reality, it must have been made present to us in the only way in which it could conceivably be made present to us *as* past—namely, by a presented “schema of temporal relations of mutual existential externality.”

But why “existential”? asks Mr. Strong. “How comes *existence* to be present in what is only a datum of conception”? Conceiving here means either imagining—“and then we have not got beyond the region of images”; or else it means “a cognizing of the existent—and then transcendence has been surreptitiously introduced, the question has been begged. By merely conceiving existence in the former way you do not *reach* existence.”⁹ I answer that I should suppose nothing to be more evident than that in memory you do *not* “reach the existence” of the past event. If you did, that event would be your immediate datum, and your apprehension of it would necessarily be exempt from error. And anyone who thinks the event *as* past is aware that he is not “reaching” it; he apprehends it as beyond his present experience. What he ascribes to it, if he believes his memory to be veridical, is existence—an ultimate and indefinable notion; but it is not present existence, as his lan-

⁹ *ML*, p. 679; last italics mine.

guage makes evident when he uses "was" instead of "is." It is precisely its existence that he thinks as past; its characters, in so far as there is any imaginal recall, are present to him in the image. Why Mr. Strong demands of a description of memory that it should show how we literally "get beyond the region of images" and "reach" the past event, I find it hard to understand. For he has already told us that "real things are incapable of being given." In the special case of memory the only "real thing" that can be in question is the prior experienced event; and this is even more evidently incapable of being now given than the coexistent physical object in perception.

II

Perception.—Mr. Strong's criticism of my "theory of perceptive knowing" rests in part upon a serious misapprehension of the view criticized. I do not hold that a (visual) "sense-datum is an existent whose place is *here*—that is, where my body is." On the contrary, I agree—with an obviously necessary qualification—that "I feel it [the datum] as being a certain distance from me"; i.e., all such data, except those which constitute the visual content called parts of my body, are seen, at least by adult human perceivers, as spatially external to the perceived body; and they also, according to the variety of the realistic hypothesis which I hold, are not in fact in the place occupied by my physical body. It is not, indeed, true that the visual datum and the real object can, upon reflection, be held to be in the same external place at the same time; and the fact that they can not is one of the familiar reasons for the dualist's contention that they must be existentially two. But this is manifestly not equivalent to saying that the datum is not in any "external place." It is there, however, only in the way in which—as Mr. Strong also holds—a datum can be said to "be" anywhere; namely, for and during my awareness of it, and in dependence upon the occurrence of the percipient event. For I further agree with my critic—though he seems to think that I do not—in the view that "the existence which I ascribe to the object seen is not of the same sort as the existence of the sense-datum."¹⁰ The object is a physical and the datum is a mental existent. That a proposition which (to the scandal of some readers) I have so explicitly defended should be brought forward as an "objection to [my] theory"¹¹ seems to me surprising. It is true, however, that a little later it is recognized that I "admit" this proposition.¹²

This misunderstanding seems to be connected with a confusion

¹⁰ *ML*, p. 680.

¹¹ *Ibid.*

¹² *Ibid.*

of perceived spatial externality to the percipient's body with conceived existential externality to the present perceptual experience. The distinction between datum and object does *not* consist in "the antithesis between the external place and the place of the sense-datum." In visual perception the entire visual field, with the three-dimensional relations between the objects in it, constitutes the immediate content of the experience. To be aware of something as "out there" is not to be aware of it as "real" in contrast with "apparent"; for it conceivably may be, and—as Mr. Strong has himself remarked—in naïve perception it is, *seen* as at a place outside that occupied by the perceived parts of the body, without the presence to consciousness of any distinction of the given and the not-itself-given, of the presented and the transcendent. But it is only when this distinction is in some degree present to consciousness that referential experience occurs. Consequently no theory concerning the awareness of extra-corporal position has any pertinency to the problem of reference.

I turn now to Mr. Strong's "sensori-motor theory of perception." The exposition of this in his *Essays on the Natural Origin of the Mind*¹³ is presupposed in his article. Since it is desirable that I should give my own understanding of it, and that the reader should have this clearly before him, I will attempt to summarize briefly those of its essentials which are pertinent to the present discussion, as I have gathered them from both sources. If, as is quite possible, I have at any point misapprehended the hypothesis, that fact will thus become evident. Such a summary will necessarily fail to do justice to Mr. Strong's own presentation; yet its brevity will, if it is correct, serve to bring out more sharply certain issues.

The theory, then, runs as follows: There are (1) "real things" having spatial position and extension. But in and for themselves these are "sensations" or "particles of sentience." When, however (at a later stage of the process) one of them is perceived by another, it "appears" as a body. Sensations and bodies are the same substance with two "aspects," internal and external. (2) A group of these bits of sentience is a "self" or "soul." (3) When one of these units or complexes of extended mind-stuff acts upon another at a distance it produces therein "sense-impressions," i.e., changes in the sensations which constitute the other. (4) These new sensations cause the bit of mind-stuff that is acted upon (if it is an organism) to react. This reaction consists, in part, in its "outer aspect" of muscular movements, in its "inner aspect" of kinesthetic sensations, e.g., in the muscles which move the eye-ball.

¹³ Here cited as *NOM*.

(5) These movements, or the positions of the organ which they produce, are spatially directed upon the external body (or piece of mind-stuff). They "intend" or "refer to" the real thing from which the stimulus came. This does not (apparently) mean that, thus far, the organism is aware either of that body *as* external to its own, or of the distinction between "real things" and "apparents."¹⁴

(6) But along with these reactions—or, on the "inner side," with the kinesthetic sensations—there take place certain peculiar processes. When, e.g., a cat is in the presence of a mouse, the visual impressions, which constitute "the state of the cat's self" produced by the external real thing, namely, the mouse, are at once "simplified," "reduced," and "projected" into the space outside the cat. The animal becomes aware of them as "out there." These projected sense-impressions of the cat are her "sense-data." They are "not real as the sensations are," but are merely "phantasms"; for there may be (? or is) no real thing, in other words, no actual bit of mind-stuff, at the place into which they are projected. The reality which underlies them is in our heads.¹⁵ Nor are their qualities necessarily or completely identical with those of the real thing to which the cat is reacting. This, however, is an observation made by Mr. Strong as a metaphysical commentator on the cat's experience. The cat herself at this stage is supposed to be aware of them as spatially external to her body, but not to be conscious that they are either locally or qualitatively distinct from the real thing. These metaphysical distinctions do not occur to her; she just "uses" her sense-data, and they constitute the only extra-corporal thing which is presented to her. (7) In consequence, however, of the discovery—by man, and perhaps by some of the higher animals—of the facts of illusion and error, there arises the idea of "apparents" in contrast with real things. The sense-data sometimes give rise (there is an enormous jump in the explanation here) to expectations which subsequent experience does not verify; and it thus comes to be recognized that data and real objects may not be the same. (8) Nevertheless, Mr. Strong insists, "even when the real thing appears falsely, as it often does, it is still the real thing, and not any 'appearance' or immediate object distinct from 'the real thing.'" (In other passages all that appears to be asserted is that "when or in so far as we perceive *truly*" the datum and real thing are existentially identical.)¹⁶

¹⁴ *NOM*, pp. 92–93; *ML*, p. 683. This "reference" is not the sort of reference with which the analytical question is concerned. It means "reacting towards an object which is real"; it does not mean "apprehending the object as real."

¹⁵ *NOM*, p. 97.

¹⁶ *NOM*, p. 28, pp. 112–113.

Now all this, except the last proposition, seems to offer primarily, if not exclusively, answers to certain genetic questions. It is an account of the ways in which (i) sense-data, and the "sense" of bodies as being spatially external to the perceiver's body, and, (ii) the consciousness of the distinction between real things and sense-data as apparents, are generated. Since I am not concerned with these genetic questions, it is unnecessary to comment on Mr. Strong's answers to them. But he seems to conceive that the theory summarized affords an answer also to the metaphysical and the analytical questions about perceptual knowledge. Does it in fact answer either?

To the metaphysical question it gives no answer—which is not to say that none can be given. It does nothing to "repair the breach between datum and object known." It is true that he sometimes tells us, as in (8), that there is no breach, that the two are one. But not only is this an unsupported assertion; it is an assertion inconsistent with his theory. According to that theory, sense-impressions are "states of the self"—or, in their "external aspect," of the body of the animal. As such, they are not where the external object is. They are, moreover, generated by a presumably complex process involving the external object, a stimulus, and a resultant change in the self, or body, acted upon. That the terminal effect of this process either must be or can be existentially identical with the initial causal object does not appear. It exists at a time as well as a place different from that of the object. True, the sense-impression is said to be projected, thereby becoming a sense-datum. But *what* is projected is a state of the self, not of the real thing; and the "phantasm" which results, though, by the hypothesis, it should be qualitatively identical with some state of the self, is not the same particular as any part either of that self (or body) or the real thing. That it is not follows, among other reasons, from the admission that it is not "real" as both of the others are; it "exists" only in the sense of "appearing." If it were the same thing as either the object or the body, it would be as real as they are. And the place to which it is projected—in which it has its own distinctive "sort of being"—is no more identical with that of the real thing than is the place of the sense-impression of which it is a projection. Mr. Strong, if I am not mistaken, occasionally suggests that it may sometimes be the same; but there are familiar reasons for thinking otherwise, and the theory of projection as such does not imply, or give any reason for thinking it probable, that they are the same. What Mr. Strong has given us, in short, is simply a panpsychist or "double-aspect" variant of the generative theory of sensa; and any such theory involves the view that the

datum and object are two distinct existents, and that we apprehend the latter by means of the former. To the often-urged objection that this view implies that knowledge of external objects is impossible, Mr. Strong himself has elsewhere replied in passages of admirable force and clarity. But the sensori-motor theory does not of itself eliminate that difficulty; for, as its author on occasion, and with reluctance, admits, it is still a form of epistemological dualism. It asserts, when consistently expressed, that all that we ever have immediately present in perception consists of sense-data which are phantasms and *not* real things. The "breach," then, remains.

As little does the theory offer an answer, alternative to that which I have proposed, to the analytical question. That question relates to the situation which arises at the stage at which both sense-data "*distinct from the cognoscendum*"¹⁷ or real thing, and a consciousness of the antithesis of "real things" and "apparents," have been generated. It is in this situation, as Mr. Strong repeatedly admits, that we human knowers find ourselves. There is, no doubt, as I have already said, a naïve kind of perception in which not the dimmest notion of possible existents beyond and apart from the immediate content is present to consciousness. That the perceptions of cats consist wholly of this sort of thing I should think quite possible, though I can myself claim no real acquaintance with the psychic life of those animals. But whenever there is the least surmise that a thing is not what it seems or that, even if it is, it can exist at times when it is not being perceived, the idea of a transcendent realm of being (realm III) has already emerged. And this idea appears usually, though probably not invariably, to accompany the act of perception in man. Some idealistic philosophers profess to be devoid of any such idea. Even if they are—which I doubt—their deficiency is no evidence that all men are equally deficient; and if they believe that they have had previous or will have future experiences, or that there occur experiences not their own, they are still exemplifying transcendent reference, to the two other realms.

Mr. Strong, at all events, not only admits but insists that we full-fledged cognitive creatures are capable of discriminating between "existence of that thin sort which belongs to data, and is shared by them with ghosts," etc., and the "thick sort that characterizes mountains, fire, enemies, food and drink." And "the vital thing," he tells us, "in a theory of the nature of knowing, is to explain how existence in the thick sense is made present to the mind." This last is a way of *putting* the analytical question. But

¹⁷ *ML*, p. 673.

the only possible answer to it, I suggest, is the one which I have already presented.

For what is meant by the "thick sense" of existence, and is *that* kind of existence itself ever literally given at first hand? As sensibly given, mountains and the rest are, for Mr. Strong as for me, private data existent only in the "thin" sense; the data may "depict," but they are not, mountains. The mountains, being real things, are, as Mr. Strong himself says, "incapable of being given." Yet a reference to real things is consciously made, as he also agrees. It never could be made, the contrast between real things and appareants could never even be entertained by us, unless we were capable of experiencing, without actually transcending the limits of what I have called region 1, a *conception* of that region as encompassed by a "beyond"—and also, indeed, of regions 2-6 as less than the whole of existence.¹⁸

The islands feel the enclasping flow,
And then their endless bounds they know.

Without this neither dualism nor any kind of realism would be so much as thinkable. For the realist means by "real things" existents not merely transcendent of present experience and of my experience, but at least potentially transcendent of experience *überhaupt*.

I say "at least potentially" because there is a way of thinking of a real thing in which it is not conceived as actually and at the moment of perception transcending the limits of the present perceptive experience. In other words, there appear to exist realistic epistemological monists; and what they report themselves as thinking is that the present physical object could be, but isn't, existent apart from the perceiving of it. Between its being and that of their present datum they recognize no distinction. Yet even they, if they are in fact thinking realistically, are conceiving of an external region, namely, of region 7; to say that the object could, even now, be without being perceived, is to say that one is conceiving of such a region. These philosophers are also manifestly conceiving of referents in regions 8 and 9, i.e., of past and future physical things or events which are not existent in region 1, since their actual existence is admittedly not compresent with the event of knowing them, and since, also, it is assumed that some of them were not, or will not be, at the time of their actual existence, presented for anybody's awareness. Since the recognition of these

¹⁸ I call it a conception for the obvious reason that the distinction of appareants and reals is not sensibly given. We do not visually *perceive* that our data are not the objects known, nor that things can go on existing unperceived, nor that the world may contain things that are never perceived—that, in short, there is a realm of the-existent-but-not-given.

three modes of transcendent reference is logically implicit in realistic epistemological monism, the adherents of that view are confronted with a question to which they can give no consistent answer: How can reference to existents *as* transcendent (in any mode) be reconciled with the general thesis of the existential identity of the object or event known with the content of the particular cognitive experience in which it is known?

. But my present contention is with Mr. Strong; and enough has, I think, been said to show that his sensori-motor theory is irrelevant to the question of the *modus operandi* of referential experience, and that it contains nothing that conflicts with the considerations presented by me in justification of my answer to that question. Though I am not able to accept his pan-psychist metaphysics or the whole of his answer to the genetic question, there appears to be no reason why *he* should dissent from my account of transcendent reference and its rôle in cognition. Nevertheless he does dissent; and the fact needs to be explained. The explanation, I think, lies in a tendency to deviate at times from the dualism which he has so often and so effectively defended. He is not alone among essentially dualistic philosophers in yielding, now and then, to a natural desire to enjoy the pleasures of epistemological monism for a season.

For the only pertinent objection which he urges against my description of the nature of reference, and therefore of cognition, is simply that it is dualistic. "Perception," he writes, "is clearly the seizure of a real thing"; and his complaint of the theory he is criticizing is that it "does not explain this seizure." Existence "in the thick sense" must be "reached" or "grasped," if we are either to think of or to believe in it. I reply that "real things" and "the thick sort of existence" never are and never can be "seized"; that if they could be, the distinction of two sorts of existence would never occur to us; that epistemological dualism consists, in part, precisely in pointing out the impossibility of "seizing real things," i.e., of having them directly given as a part of the content of the present cognitive event; and that Mr. Strong's own theory expressly denies the possibility of their being thus given. One dualist should not, I think, reproach another for failing to "explain" how a thing takes place which, as they both hold, does not take place. It is only through a transient relapse into naïve realism that Mr. Strong can have come to demand such an explanation. Since, then, we differ about the matter with which this discussion is concerned, only when Mr. Strong abandons the premises which he has laid down at the outset of it, I can not but hope that at the end of it he will agree that knowing, in so far as it is "something more" than the blank awareness of sense-data or imagery, is made possible solely by the fact

that there is given *in* any cognitive experience the idea of a realm or realms of being not therein given, that we are provided with means of referring to regions lying beyond that experience without reaching them.

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La Filosofia di Platone dai dialoghi socratici a quelli della maturità. A. FERRO. Pubblicazioni della scuola di filosofia della R. Università di Roma, VI. Roma: Tipografia del senato. 1932. 267 pp.

Il Problema della Metafisica Platonica. ERNESTO GRASSI. Bari: Gius. Laterza & Figli. 1932. 227 pp.

In his scholarly study of Eleaticism, Calogero traces the rise and fall of that imperious doctrine from its initial statement by Parmenides through its systematic construction in the hands of Melissus to "the crisis, inadvertently prepared by Zeno and his Megaric followers, which was exposed in the irony of Gorgias and Plato." The "crisis" resulted from the partisan zeal of Zeno, who replaced the speculative doctrines of his predecessors with controversial arguments. Unfortunately, his antinomies tended to refute the doctrine of the One no less than the doctrine of the Many. In each argument, "the thesis always affirms the Parmenidean motive of the finite, while the antithesis always ends by maintaining the Melissian motive of the infinite" (p. 107). The destructive consequences were made manifest in the nihilism of Gorgias and in the ironical (but nonetheless philosophically significant) paradoxes of the One and the Many in Plato's *Parmenides*. The most original feature of Calogero's interpretation is the importance which he assigns to Melissus. He is said to be "the ideal successor of Parmenides, instead of Zeno." Melissus attempted to construct a more rigorous speculative system out of a doctrine that had rested mainly on considerations of language and logic. The insight of Parmenides into the fundamental unity of thought and discourse had led him to distinguish between the "being" that is inseparable from the expression of truth and its contrary, which is absolutely inexpressible. The "way of opinion" was not intended by Parmenides to represent any objective properties of existence but

denoted an *aporia*,—a problematic although wholly co-natural opposition to “being,”—considered alternatively as “a pure phenomenology of error” or as a secondary realm of verisimilitude. While “Opinion” is the complete negation of “Truth,” it is nevertheless indispensable to the latter in its ideal genesis. Melissus, ignoring the logical and linguistic foundations of this doctrine, discerned two metaphysical difficulties: one in the alleged finitude of “being,” the other in the antithesis between the apparent world of Opinion and the real world of Truth. He met the first difficulty by his essential identification of spatial with temporal dimensions. The *ὅν μόνον* of Parmenides’ logistic was hypostatized and conceived as a Being transcending all limits in space or time. It found its typical expression through the ontological attributes of immobility and immutability. In this way, Melissus also tried to overcome the opposition of the One to the hypothetical realm of the Many. “To be, for Melissus, means essentially to remain equal in time” (*durare eguale nel tempo*). If the Many do not remain immutable and motionless, the Many simply *are not*,—not even a realm of appearances contrasted in thought with reality. “The identity of the eternal present, the *νῦν* of Parmenides, is extended into the identity of the *ἀεί*, eternal continuity.”

Ferro’s *La Filosofia di Platone* is the first of a proposed series on Plato and the history of Platonism. In his exposition of Plato’s philosophy, the author plans to combine an analysis of the contents of the several dialogues, in the manner of A. E. Taylor, with a systematic treatment, in the manner of Zeller. The present work contains an introduction on the life and writings of Plato, with some comments on contemporary methods of criticism, and a brief summary of each of the Socratic dialogues, together with the *Phaedo*, *Symposium*, *Republic*, and *Phaedrus*. Several dialogues, usually regarded as spurious, are included on the ground that they express the genuine tendency of Plato’s thought. A considerable portion of the book consists in a paraphrase or translation of selected passages from the dialogues, their systematic interpretation presumably being postponed to later works in the series. In general standpoint and in style of presentation, *La Filosofia di Platone* resembles Taylor’s *Plato, the Man and his Work*.

Il Problema della Metafisica Platonica represents a novel experiment in the interpretation of Plato. The author has sought a clue to the Platonic metaphysics in the structure and sequence of arguments in a single dialogue, the *Meno*. Here the discussion between Socrates and Meno is shown to be a progressive development of an “aporetic attitude” (*atteggiamento aporetico*), beginning with a particular problem about the teaching of virtue and leading

on to a general insight into the grounds of all human knowledge. The "metaphysical problem" has to do with the principle of determination. Its solution requires first that the "objectivism" of the Sophists be overcome, as represented by Meno's inadequate definitions of virtue. The Platonic *eidos* is then introduced, but not as a transcendent object or a datum supposed to exist apart from rational inquiry. It is revealed as a limiting condition rather than a solution of the metaphysical problem. In short, the dialectical development of a problem or a series of concatenated problems, as exemplified in the *Meno*, involves an inner "aporetic" necessity (to which a semi-mythical expression is given in the doctrine of reminiscence). "The metaphysical determination of being" is to be found in the Socratic *aporia* itself, as an *active process* of inquiry, in which alone the truth or falsity of an hypothesis can be established. Grassi's conclusions may recall Natorp's version of Plato's *Ideenlehre*, but the method by which he arrives at them is original and suggestive.

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History, Psychology and Culture. ALEXANDER GOLDENWEISER. New York: A. A. Knopf. 1933. Pp. xii + 475.

The years from 1910 to 1920, during which the principal essays now brought together in this volume were originally published, constitute a period during which American ethnology was becoming acutely aware of the historical nature of its subject-matter. The papers composing parts 1 and 3 of this collection ("History, Psychology and Culture" and "Totemism") were among the most important critical contributions of the American school to the discussions of fundamentals of those years.

In his studies of totemism Goldenwieser attacked the problem of defining cultural identities. Hasty and premature identifications in terms of apparent similarities had been responsible for many fine-spun theories. When human history was viewed teleologically or evolutionally, the same manifestations appeared necessarily in different times and places, so that similarities were keys to identities which could be accepted categorically. From the historical standpoint, viz., that the determining career of any event is the matrix of its reality, and that because of plurality of causes and uniqueness in time the character of any event is necessarily unique, it was apparent that complex events which were partially alike could not in their totalities be classed together. This point is illustrated in detail in "Totemism," in which it is shown that no definition of the content of totemism embraces all the manifestations which at one

time or another, by one commentator or another, were called totemism. Since totemism can not be defined in terms of content, Goldenweiser attempts to define it in terms of a relation, viz., "Totemism is the tendency of definite social units to become associated with objects and symbols of emotional value" (p. 318). Most students, however, remained more convinced by Goldenweiser's destructive analysis than by his constructive suggestions, and regarded totemism, after this study, as an abstraction which represented no reality. Neither Goldenweiser nor Boas, who speaks of totemism as "an artificial, not a natural unit," considers in how far the concept can be used as a term if limited in reference to the phenomena for which it was first used (eastern North America), or to the phenomena to which by usage it had become definitely attached (Australia); both are rather concerned with its validity as a cultural universal. Boas is content with a definite negative, adhering to no rigid definition of totemism, but retaining it as a general designation for phenomena which are not fundamentally related, but which must be derived from differing psychological and historical sources. Goldenweiser, on the other hand, is convinced that there is an identity in totemism in the psychic quality which arises when a sib system and a nomenclature which is suffused with supernaturalism and mysticism become associated into a complex. The meaning of this identity he finds in the tendency of social groups, such as sibs, to objectify their solidarity and unity by the use of symbols, such as totems and totemic names, which, when it occurs in a world of human experience dominated by nature mysticism, results in a totemic complex, and the appearance of the totemic quality.

To Goldenweiser this solution, as expounded in his later papers on totemism, is historical in character as opposed to the analytical tendency of the original study. It is historical because totemism is characterized as a quality of a relation between cultural institutions; the determinants of the separate components need not be known, and the fact that the components co-exist may be relatively accidental. Nevertheless, when such an accident occurs, the relation has a type quality.

A converse of the problem of defining cultural identities was that of explaining cultural similarities. Two alternatives were being taken: Similarities in culture were due to derivation from the same material source (borrowing). Similarities were due to the same causes (independent origin). The latter was essential to the evolutionary position, in terms of which similarities necessarily occurred because the activity of the human mind when caught at the same point of the unfolding process registered the same outer manifestation. Such similarities were parallelisms. Dissimilarities, obviously,

were functions of difference of stage in the process. The American critique of evolution as the explanatory principle of human history had necessarily to offer an alternative explanation for parallels. For parallels were not only a by-product of evolution: they were the evidential basis for the conception of the process. Goldenweiser defined as an alternative the concept of convergence as a result of limitation of possibilities. This does not deny that like effects imply like causes, but substitutes nearer determining conditions for remote theoretical causes. He argues that when similarities can be understood as convergent results of limitations of possibilities in terms of function or need, parallelism is an unnecessary conception and borrowing an unjustified assumption.

Basic to such considerations was a metaphysics of history which Goldenweiser defined in the title paper of this volume. Determinism of historical events is true only within the limits of defined systems of relations; accident or the clash of systems is the rule rather than the exception; individual events are therefore particular and unique.

One can heartily concur in Goldenweiser's affirmation of the necessary place of the psychological in the study of history and culture—an affirmation made important by the mechanical treatments of culture still attempted in some quarters. It is important to note, however, that Goldenweiser is referring to psychic qualities of experience, not to the data of the science of psychology (p. 7). One can not as heartily endorse some of the critical discussions reprinted in the volume; those of Levy-Bruhl and Durkheim, for example, are hardly definitive. Goldenweiser himself has called attention to the over-critical tendency of the American school, which is, I think, illustrated in such papers, and asks for a "liberation of American ethnology from its methodological bondage." "When criticism and method cease to be heuristic tools and become ends in themselves, creativeness withers" (p. 164). Goldenweiser rightly asks for more vision, but in anticipating that creativeness calls for a relaxation of methodological rigor (*ibid.*) he is himself at fault. The ethnologist must rather seek creative development of sound method and in its terms follow his material wherever it leads.

ALEXANDER LESSER.

NEW YORK CITY.

The Happy Beast in French Thought of the Seventeenth Century.

GEORGE BOAS. Baltimore: The Johns Hopkins Press. 1933. vi + 159 pp.

Philosophy and Poetry. GEORGE BOAS. Norton, Mass.: Wheaton College Press. 1932. 34 pp.

The stout thread of their author's versatility, surely a trait admirable in a teacher of philosophy, may serve to unite these two

books. The first is described as "an accidental by-product of studies . . . in the history of primitivism," which deals with "the fortunes in France from the time of Montaigne until the beginning of the Eighteenth Century" of what the author christens "theriophily," or the cult of the Happy Beast. Among the primitivists, those "men who looked to their pre-civilized fellows as exemplars of human conduct," were some who "turned their admiring glances below man and found the true models in the animals," which were deemed to be more "natural" than man, and "hence man's superior." Professor Boas traces the many appearances of this point of view, which is as old as the Greeks, on several different planes of French seventeenth-century thought, noting its contacts with scepticism, anti-intellectualism, and, late in the century, with vitalism. On the whole the tendency seems to have been to shift the emphasis from the literary issue of the relative nobility of animal and human conduct to the metaphysical question whether or not beasts have souls, thus preparing the way for the eighteenth-century debates over Buffon and Lamarck. Although the author disclaims finality for his study, within his restricted field the work is thorough and his documentation (there are 363 footnotes in less than half that number of pages) has a solidity that is welcome in an American monograph. The book's quotations, which are numerous, are in the original languages. Further volumes in the Contributions to the History of Primitivism from the Johns Hopkins group headed by Professors Lovejoy and Chinard will be awaited with interest.

In his Annie Talbot Cole Lecture at Wheaton College Professor Boas maintains the thesis that "a philosophic poem is philosophy made concrete," using as his chief illustration Robert Bridges' "The Testament of Beauty." Mr. Santayana once expressed much the same opinion, that "it is the function of poetry to emotionalize philosophy;" and the present reviewer has pointed out elsewhere that it was substantially Mr. Santayana's philosophy which the late Poet Laureate emotionalized in his truly majestic poem. It is one of the scandals of the present age, in any event, that so few teachers of philosophy appear to have any acquaintance with what is by all odds the most ambitious philosophic poem of our century—perhaps, in spite of its weakness on the side of the social order, the *De rerum natura* of our time. Professor Boas may well be content if his lecture arouses a wider interest in "The Testament of Beauty." It is difficult to refrain from quoting two of the more striking sentences from "Philosophy and Poetry": "What is known as philosophy is often the edifying metaphor by which man struggles to envisage concretely his answer to unsolved problems;" and (speaking of philosophers recruited from among the scientists) "they build up

metaphors which have all the meaninglessness of poetry with none of its significance."

HAROLD A. LARRABEE.

UNION COLLEGE.

Frédéric Rauh: Essai de biographie intellectuelle. ROBERT JUNOD.
Geneva: A. Jullien. 1932. 240 pp.

Perhaps it is not to praise Frédéric Rauh to characterize him as one of the most American of recent French philosophers, at least in the sense that his work is largely impressionistic, moralistic, and scattering in its choice of subject-matter. This may account for the neglect which has been his lot since his premature death in 1909 at the age of forty-eight, after a career spent in twelve years of teaching at Toulouse, and eight years at the Sorbonne and the École Normale Supérieure. One fears also that in spite of Dr. Junod's able and friendly exposition of his philosophy, the neglect may continue but little diminished in the future. This in spite of the fact that Rauh's personality and vision, as the author presents them, are markedly attractive. There are Jamesian touches in the lines of his personal portrait, as well as in his philosophical position.

The case of Rauh is one more proof that in philosophy, sensibility and vision are not enough. There must be clarity and rigor, which Rauh seldom achieved. His vision, centering about the notion of "living experience," is best expressed in his principal work, *L'expérience morale* (1903), upon which, says Dr. Junod, his own work may be regarded simply as "one long commentary." Rauh commenced his career as a Kantian vindicator of the inner life against the prevailing naturalism of Taine and Spencer, drawing his chief inspiration from such admirers of the humble heart as Tolstoi and Pascal. Later his standard became that of *l'honnête homme*, whose conscience is his unfailing guide, and whose God is found within him in his moral thought-action. It is this *vis a tergo* in all human experience which will ultimately bring all men into substantial moral agreement. But upon what platform, no man can foretell. Rauh makes heroic efforts to steer clear of all the classical ontologies, and to maintain an "integral relativism" and experimentalism in ethics. Ideals, like hypotheses in natural science, are tentative. "It is the normal state of man to love, as if they were eternal, beings which are perishable." Rauh's own convictions were approximately liberal and *Jaurésiste*, his socialism being tempered by a sceptical refusal to bind himself to party dogmas. On the crucial issue of methods of experimentation in morals, Rauh fails us almost completely, for he speaks merely of direct feeling or intuition somehow "verified by the facts" of his own experience.

Like thousands of others, he believed he was right in his own moral judgments, and he was sure that eventually all sincere thinkers would come to agree with him. But he could not translate that faith into a philosophy.

In the closing years of his short life, Rauh began to speak in terms of a "radical empiricism" and a "*polyréalisme*" which suggest the influence of Renouvier and James. But Rauh's radical empiricism was not oriented in the direction of the monism-pluralism issue, and it contained formal elements not to be found in James. He had read too much Spinoza not to be haunted to the end by that notion of substance which he, like James, had set out to destroy. If Rauh is remembered, it will be for his gallant attempt to vindicate experience and experiment as the living source and method of moral philosophy, rather than for any great success in defending that insight. He believed in freedom and practiced it; but freedom still awaits its philosopher.

UNION COLLEGE.

HAROLD A. LARRABEE.

Systematic Sociology. LEOPOLD VON WIESE and HOWARD BECKER.
New York: John Wiley and Sons. 1932. Pp. 772.

Students of philosophy always find it consoling to notice that "scientists" quarrel with one another as vehemently as philosophers do. The fact is, of course, that unanimity prevails as little in the scientific field as it does in the reputedly more abstract regions of philosophic speculation. Scientists are inventors of theories; their mind, like that of the philosophers whom they misunderstand, soars in the realm of the imagination. The sophisticated scholar, consequently, is inclined to smile with sadness when he reads in a bulky volume devoted to the elaboration of a "systematic sociology," that "'theories' are not sociology" (p. 696). If sociology were not theoretical, it is difficult to understand how it happens that the author of this very quotation finds it necessary to devote no less than six very closely printed chapters of his book to a justification of his general point of view and to a polemical criticism of all past and future approaches to the subject different from his own.

Professor Howard Becker, the American translator and disciple of the German sociologist, Leopold von Wiese, is convinced that sociology first received its scientific titles with the appearance of Leopold von Wiese's *Allgemeine Soziologie*, in 1929. Before that date sociology was only a pseudo-science. In the eyes of our author, Comte, Spencer, Lillienfeld, Schäffle, Ratzenhoffer, Wagner, even Durkheim, Oppenheimer, Weber, and Simmel, are really social philosophers, not at all social scientists. These scholars constantly con-

fuse judgments of value with judgments of fact; and everyone knows how fatal such substitution is to the progress of genuine knowledge. Furthermore, every science must have a specific object of study. Sociology must be made into a special social science, carrying on its labor without infringing upon already well-established social sciences. All sociologists, with the exception of von Wiese, we are told, have overlooked this important consideration. The result has been again, according to our author, all kinds of fantastic elucubrations in the guise of encyclopaedic sociology or social philosophy. And no horror can equal in darkness the perpetration of a social philosophy. On this score the author is unequivocal. Philosophers will be amused, but also highly enlightened, to read the following gems from the pen of a colleague in the department of sociology, in the year of grace 1932:

Sociology leaves the cloud-encircled heights of ultimate solutions to the philosopher [p. 668].

Sociology illumines with the searchlight of its method a portion of the clearly visible surface of the social globe; at the edges everything becomes dim. . . . It is a part of its task to draw exact boundaries between what is clearly lighted and what is vague. In the neighboring domain, on the other side of the boundary, roams the philosopher, who is provided with another kind of light. He claims to be able to see excellently with it, although there are, of course, sceptics who hint that with it only one's own inner countenance is perceived, and that the surroundings still remain obscure [p. 678].

Metaphysics, like philosophy in general, should be the affair of only the very few for whom there are no worldly ties and who speaks when and how the spirit moves them. Metaphysics is for the seer, not the savant [p. 679].

The foregoing quotations constitute a fair sample of the general style and spirit which prevail throughout the whole volume. The present reviewer feels that it is indeed a great pity that the several pages of conscientious cataloguing of inter-human relations and "plurality patterns" which this volume contributes to our knowledge of social phenomena, should be clothed with such a heavy padding of uncouth and irrelevant material. The result is staggering.¹

The present reviewer is somewhat harsh in his appreciation of Professor Becker's gargantuan "amplification and translation" of von Wiese's *Allgemeine Soziologie* because he feels it his duty strenuously to discourage the importation into our native scholarship of barbarous productions from abroad, at a time when we may safely boast of more significant works at home. The task before us to-day, in all fields of scholarship, is to create a classic literature of our own. American scholarship has nothing to gain and everything

¹ For an effective "chaser," the reviewer very warmly recommends Professor MacIver's recent book entitled *Society: Its Structure and Changes*. Professor MacIver's contributions to sociology are significant; they breathe the spirit of broad philosophic culture.

to lose by the translation of such pedantic works as the one under review.

MOSES J. ARONSON.

THE COLLEGE OF THE CITY OF NEW YORK.

La Croyance de Platon à l'Immortalité et à la Survie de l'Âme Humaine. JEAN ITHURRIAGUE. Paris: J. Gamber. 1931. 188 pp.

M. Ithurriague's essay consists of two parts: first, a general statement of Plato's opinions about a life after death, as indicated mainly in the *Gorgias*, *Phaedo*, *Republic X*, and *Laws X*; second, a discussion of the sources of these opinions in pre-Socratic poetry and philosophy, in the Socratic ethics, in the mystery cults, and in popular tradition. The interpretation is based on "the firm conviction that Plato first believed in the survival of the soul; it was only afterwards and doubtless under the force of circumstances that he tried to justify his belief" (pp. 21-22). This initial faith, involving elements beyond all rational analysis, found its most adequate expression in the form of myths, in which Plato gave a new and deeper significance to religious traditions. His dialectical arguments were of secondary importance only, supplementing the "impression" of the myths with merely probable reasoning.

M. Ithurriague makes no attempt to distinguish between an "ideal" immortality and a "substantial" survival of the soul, nor does he face the difficulty regarding the continued existence of individual souls in Plato's doctrine.

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REVUE PHILOSOPHIQUE. 58^e Année, Nos. 9 et 10. Le mémoire de Berlin (1806): *Destutt de Tracy*. Site et champ: *J. Nogué*, Cosmogonie et philosophie de l'histoire: *J. Delevsky*. Note sur l'expérience de Foucault: *G. Bénézé*.

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Blondeau, Cyrille: *Propositions de Philosophie*. Paris: Félix Alcan. 1932. xix + 235 pp.

Fernández, Ramón Soto: *El Libro del Saber*. Toledo: Talleres Tipográficos de la Asociación de Huérfanos de Infanteriá. 1933. 150 pp.

Reiser, Oliver L.: *Humanism and New World Ideals*. Together with the Full Text of *A Humanist Manifesto*. Yellow Springs, Ohio: The Antioch Press. 47 pp.

Serrus, Ch.: *La Méthode de Descartes et son Application à la Métaphysique*. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. 125 pp.

Spirito, Ugo: *Scienza e Filosofia*. Firenze: G. C. Sansoni-Editore. 1933. 154 pp.

Volpe, Galvano: *La Filosofia dell'Esperienza di Davide Hume*. (Pubb. della Scuola di Filosofia della R. Università di Roma. VII.) Firenze: G. C. Sansoni-Editore. 1933. 191 pp.

NOTES AND NEWS

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THE JOURNAL OF PHILOSOPHY

THE INNOCENCE OF THE GIVEN

THE world is full of a number of things. Some of them are known about by human minds. Some are actually *given* to human minds—that is, they are ingredients of the conscious experience of those minds. There is plainly an intimate relation between the process by which things are known about and the process by which things are given. This intimacy has been made much of by the epistemological tradition in modern philosophy, until almost any discussion regarding mind and its object is shot through with unexamined assumptions concerning what must be known about the given or what can not be known about the ungiven. The following pages are designed to help discover the true relation of knowledge and givenness, and will attempt to unravel some typical snarls in contemporary theory by means of the principle, in many respects not unfamiliar, that givenness is not knownness, and that the givenness of a thing is neither necessary nor sufficient for a knowledge about it. The given is as such mere *fact*, innocent of self-knowledge, to be known, if at all, indirectly, inductively, and inconclusively.

This account represents itself as an instance of knowledge about the given, and therefore represents itself as fallible. With this reservation, I assume the reality of what is called conscious experience, in myself and others. Regarded introspectively, the mind reveals itself as an organization of conscious experience, a rapid pattern of qualities and relations. In this gallantry-show of experience, *knowledge* is not so clear-cut and personable as we often suppose. At best, however, it is a recognizable procession, beginning with a problem or an occasion, spreading through frail swift sequences of the systematic habits, the *Bewusstseinslagen*, the symbolic imagery, and the kinesthetic sensations which are the ingredients of the process of interpretation, and characteristically consummated by the experience familiarly known as fulfilled anticipation.

Everything and anything of which the mind is immediately aware, any mental content, is *given* to that mind, in the dual sense that it is an ingredient of conscious experience and that it can be a datum or occasion for interpretation. The tradition of empiricism has too often implied that there must be a queerness and speciality about the kind of thing which is "given." It was supposed that the

given must be something qualitative and simple; that it must be something coercive and apparently *imposed* from outside; that it must be a buzzing, blooming confusion, a blind problem. On the contrary, the given, as I mean it, is very often highly structured and articulate; it may be as amenable or spontaneous as you please; and it may itself be the whole fabric of an interpretation and the solution of a problem.

Readers of Mr. C. I. Lewis will recognize that I dissent from his ascription to the datum of sundry peculiarities, but will recognize also how I am borrowing from his doctrine, and especially from his recurrent theme that "there is no knowledge merely by acquaintance."¹ Mr. Lewis's work is the systematic consummation of the pragmatic theory of the percept and the concept, the theory that "having" is not "knowing" and that there is "an element of mediation, that is, of art, in all knowledge."² But that appearances blandly are what they are, making no claim and deserving no blame, *innocent* both of error and of truth, is a lesson older than the pragmatists. It was taught by Aristotle, Epicurus, Descartes, and Kant, and it is to-day so familiar on the lips of philosophers of all schools that it requires, rather than a defense, a somewhat more precise statement than usual and a more extended application. In these surveys I shall employ the word "knowledge" not only for true opinion, but also for possibly or actually false opinion, and an instance of knowledge (as an abstract particular) I shall call simply "a knowledge." Wherever I mention the "innocence" or "inscrutability" of the given, I shall mean, and mean only, the characters defined by the following paragraphs. The words are as good "marks" as I can find, but I can not be responsible, of course, for their further connotations in ordinary speech.

1. The being of x is not a knowledge about x . This follows from the fact that knowledge is a peculiar and complex structure and one within conscious experience.

2. The givenness of x to conscious experience will in general involve not even the givenness of very much *about* x . Even if x is complex, given with a content, or context, or both, it will never display all, or even a considerable part, of those characters and relations which an effective knowledge about x must know or adjust to. By hypothesis, it can not display its relations to what is not given, and just these relations are what is most frequently in question.

¹ *Mind and the World-Order*, p. 118.

² John Dewey, *The Influence of Darwin, etc.*, p. 80. The pragmatic doctrine that knowledge is not "contemplative" thus implies that givenness is not knownness. On the other hand, the pragmatic "postulate of immediate empiricism," that "a thing is what it is experienced as" (*op. cit.*, p. 234, e.g.), implies that givenness is knownness. The contradiction still apparently awaits resolution.

3. The givenness of x , no matter how rich and articulate x may be, is not *knowledge* about x . If x is not complex, or not complex in the manner of the knowledge-pattern, its givenness can not constitute knowledge at all. If x is complex in the manner of the knowledge-pattern, its givenness will constitute a knowledge; and if such x at the same time occupies also an appropriate situation with respect to a further structure which also is complex in the manner of the knowledge-pattern, then its givenness will constitute not only a knowledge, but at the same time a datum which a knowledge is about. But even at this furthest stretch, the knowledge which the givenness of x constitutes will not be the knowledge for which its givenness constitutes a datum.

4. The givenness of x , furthermore, even as an ingredient or adjunct of an actual knowledge about x , is not in general sufficient for true knowledge about x ³. This proposition is substantiated theoretically by the pragmatic analysis, which showed that knowledge is a discursive and anticipatory structure which is for the most part transcendent of and loosely knit to any of the things which it may be said to be "about," even when these things are given. The proposition furthermore is substantiated empirically by the observation that knowledge about the given is, as a matter of fact, fallible. Since professional epistemologists, at any rate, hold numerous and contrary beliefs about the nature and locus of the given, most epistemologists must be mistaken about the given. Finally, the proposition can be supported dialectically by the unmanly but, so far as I can see, unmeetable argument that if I am wrong when I say about the given that it is possible to be wrong about the given, then I must be right.

If there is any exception to the rule, it will be knowledge which is not only about the given, but about nothing but the given qualities and relations of the given. Can a person doubt that he doubts or that he intuits certain qualities in certain phenomenal relations? Such harmless exception, where knowledge converges on the presence of indefeasible fact, is certainly the nearest to infallibility. But when I try to catch myself at the actual point of infallibility, my conscious state seems to be either mere goggling attention and *ἐποχή*, or an arbitrary choice of attitude toward the given, or a scheme of conventional interpretation and communication which classifies the given with something from the past and anticipates something from it for the future. Only the last is knowledge, and it is fallible.

5. The givenness of x , again, even as an adjunct or ingredient of knowledge about x , is not in general *necessary* for true knowledge

³ This means, among other things, that even if a given x could be a knowledge about itself, it would not therefore be an infallible knowledge.

about x . This proposition also is substantiated theoretically by the analysis of knowledge, and by the apparent general extraneousness of knowledge to its objects even when its objects are given. The preceding proposition was substantiated empirically by the reflection that there exist contrary opinions about the given, and that some of these must be false. The present proposition might be thought to be substantiated equally by the reflection that there exist contradictory opinions about the ungiven (such as that it is existent and non-existent, or material and immaterial) and that one of each pair of these must be true. There is, however, a philosophical party who would controvert the latter argument by alleging that neither of two contradictory opinions about the ungiven can be called "true" because all opinions about the ungiven are "meaningless." This allegation seems to me arbitrary and erroneous, but it can be decisively countered only by a rival doctrine of meaning. To some extent our meagre analysis of knowledge affords such a rival doctrine. Meantime, virtually everybody believes he can have knowledge of the ungiven, and the only alternative to supposing that a person can know the ungiven is a mute and instantaneous skepticism, where there is neither meaning nor knowledge at all.

In order that a wide inspection of the results of the principle of the innocence of the given may seem as little diffuse and indiscriminate as possible, I adopt a simple logical architectonic. The notions to be criticized presuppose that the givenness of a thing either is equivalent to, or is implied by, or implies, knowledge of that thing. Such a presupposition is capable of application in the following forms. (1) If a thing is known, it must be given. (2) If a thing is not given, it can not be known. (3) If a thing is given, it must be known. (4) If a thing is not known, it can not be given. The first two propositions are counter-implicative, and therefore equivalent, to one another. They assert that givenness is necessary for knowledge. The second two are not equivalent to the first two, but are complementary to them. They are counter-implicative and equivalent to one another. They assert that givenness is sufficient for knowledge. I find it convenient to consider the arguments in the order enumerated, and persons who deplore so much formal logic are begged to tolerate it for its instrumental value.

1. "If a thing is known, it must be given." The extent to which this fallacy is presupposed by the theory of intuition and by the latter's critique of intellectualism is too obvious to require comment. Intuitionism, however, is an extreme variety of epistemological monism, and the proposition has been employed more covertly by the realistic monist. The latter has seemingly accepted it as major premise, conjoined with it the minor premise that we do, as a matter

of fact, have knowledge about the independent world of nature, and drawn the conclusion that the independent world of nature must actually be immanent in the experience of the knower. The same major premise is more consciously employed by philosophers puzzled by the so-called problem of the knowledge of other minds. Mr. S. Alexander, for example, urges that since we surely know each other's minds, our minds must be sometimes in literal contact with or given to one another.⁴ Either conclusion, that of the ordinary monist or that of the enjoyer of other minds, remains, of course, a possible hypothesis; but if it is false that a thing which is known must be given they are both unnecessary expedients for the purpose alleged.

2. "If a thing is not given, it can not be known." This will be recognized as the crux of an indefatigable argument both against epistemological dualism and against metaphysical realism. The epistemological dualist asserts that the objects of knowledge are not given. If it is also true that if a thing is not given it can not be known, the dualist has thereby asserted that the objects of knowledge can not be known. Nay, the dualist's very reference to an ungiven object is meaningless, and his theory confutes itself. The metaphysical realist ostensibly asserts merely that what is consciously given is significant of and continuous with a universe of events which are not consciously given. In maintaining this doctrine, however, he manifestly maintains that he knows something about the ungiven, and the subjectivist's argument against realism becomes at this point indistinguishable from the monist's argument against dualism. The accusation either that the dualistic or that the realistic theory contradicts the nature of knowledge and is in fact "meaningless" has been tirelessly reiterated by naïve realists, by mentalists, and by positivists since Berkeley's time. Neither accusation, manifestly, is of any validity in default of the assumption that the givenness of an entity is necessary to knowledge about it.

3. "If a thing is given, it must be known." The frankest exponents of this premise are the mystics and intuitionists, who maintain unreservedly that sheer givenness is a kind of knowledge so complete and certain that the discursive intelligence is in comparison a hopeless falsifier. The ideal or only way of knowing a thing is to *have* that thing or even simply to *be* it.

Now, the notion that to *be* a thing is to know it we have already repudiated in principle. In practice, it would imply that a star knows more about itself than an astronomer, and that you and I, for instance, are from birth onward utterly perfect psychologists, realizing infallibly the Socratic injunction "Know thyself." The truth is that a star, whatever its other merits, neither is nor has any knowl-

⁴ *Space, Time and Deity*, Vol. II, pp. 31-33. I suspect a similar device on the part of Ward and Laird.

edge. To *be* a star, therefore, would not entail a perfect knowledge about stars, not even a knowledge that one was a star. It would entail no knowledge at all.

The mystic, however, may claim, not an outright identity with his object, but only an immediate experience of it. Traditionally this object is God, and the experience is somehow a guarantee of its own validity. "They have had their vision and they *know*."⁵ Now, we are not at all compelled by our principle to deny that the mystic in point of fact has had an immediate experience of God, but we are compelled to deny that he is thereby in a position to judge impeccably that it is God of which he has an immediate experience. One of the most tragic delusions of humanity is that the vivid urgency of an experience certifies whatever hypothesis about that experience may be concomitantly entertained by the experient.⁶

What is true of the presence of God is true *a fortiori* not only of the supposed intuition of mundane things, of time and space, of rivers, trees, and animals, but likewise of the self or mind, which has been supposed to share special honors with Deity as an object of intuitive revelation. Cardinal Newman found "two and two only absolutely and luminously self-evident beings, myself and my Creator,"⁷ while in our time the personalists enjoy "the experienced fact that every item of experience belongs to a self."⁸ It is true similarly of the freedom of the will, in which, as Mr. Urban says, "most thinkers recognize . . . a fact of immediate experience or intuition."⁹ Especially profuse intuitions of this tenor have blessed the so-called "new humanists," who profess to intuit, at one stroke and indefectibly, that man is dual, free, and immortal. That "there is an immortal essence presiding like a king over his appetites," Mr. Babbitt says, is "a psychological fact, one of the immediate data of consciousness,"¹⁰ while a recent neo-humanist textbook alleges that it is a "directly palpable fact of experience that our feelings, thoughts, decisions do somehow effect changes in the physical world."¹¹ To all of these contentions, I believe, we

⁵ James, *A Pluralistic Universe*, p. 308. Cp. St. Bonaventura: "*Deus praesentissimus est ipsi animae et eo ipso cognoscibilis*." (Quoted by Gilson, *The Philosophy of St. Thomas Aquinas*, p. 58.)

⁶ H. N. Wieman, *The Issues of Life*, p. 190, comments instructively on this aberration of "the empirical method" in religion.

⁷ Bosanquet quotes this, *The Value and Destiny of the Individual*, pp. 253-254, and cites Bishop Westcott to the same effect.

⁸ E. S. Brightman, in *Proceedings of the Sixth International Congress of Philosophy*, p. 162.

⁹ W. M. Urban, *Fundamentals of Ethics*, p. 396.

¹⁰ *Humanism and America*, ed. Foerster, p. 39. Cp. Paul Elmer More, *op. cit.*, p. 68.

¹¹ Burnham and Wheelwright, *Philosophical Analysis*, p. 335; and similarly, p. 345.

must reply that although it is no more than doubtful whether the self, the *élan vital*, or the *frein vital* either is or can be given to the individual consciousness, it is quite certain that it never could be given that what was given was the self, the *élan vital*, or the *frein vital*.

The doctrine of intuition is of one piece with a "rich" strain in our modern empiricism which glories in the belief that the heart has its reasons which the reason does not know, and that along with the scientific intellect's way of apprehending reality there are the equally legitimate and much more "concrete" ways of religion, art, morality, and friendship. This, I think, is confused and pernicious teaching. Religious enthusiasm, artistic ecstasy, moral anguish or complacency, "the satisfied insight of personal love"—all these may be *better* than knowledge, more vital, nobler and "thicker"; but they are not better knowledge than knowledge is. They are not even substitutes for knowledge or competitors of knowledge. They are things to be known about.

Kindred to the notion of odd and uncognitive substitutes for cognition is the doctrine of the "sixth sense," the spiritual sense, for instance, by alleging which it is possible for an apologist to put the onus of personal defect on his opponent.¹² It is germane to the theory of conscience and the moral sense, and even, I think, to Mr. G. E. Moore's belief that goodness can not be known analytically or discursively, but only intuitively, "like yellow." Probably the most widely diffused error of the sort is the conviction of the uninstructed commonalty that being familiar with a thing is equivalent to understanding it. This conviction has its professional analogue in the prejudice which assails philosophy in general and naturalism in particular on the ground that a technical and analytic explanation of vital or "spiritual" phenomena, for instance, commits the fallacy of *obscurum per obscurius* and is vain sophistication.

On some less sublime issues of epistemology, the notion that the givenness of a thing entails a knowledge of it is characteristic of the arguments of philosophers who would repudiate any general charge of intuitionism. It is the grand fallacy of the whole "critical" tradition of modern philosophy that, because knowledge is given, the philosopher can begin with at least an infallible knowledge about knowledge. We have observed Mr. Alexander's assurance that if other person's minds were not given to us, we could not know that other persons have minds. More common is the

¹² "If he has not, or says he has not, this consciousness, he must be regarded as one whose powers are imperfect." Bosanquet quotes Westcott, *loc. cit.*, with apparent approval. Newman was especially adept in this nice form of castigation.

opposite assurance that if other persons' minds were given to us, we could not help knowing that it was other persons' minds which were given. Direct realists have argued similarly that experience is intuited as being "outside of the subject knowing," critical realists, on the contrary, that "transcendent reference" is an intuited part of their representative ideas, realists pure and simple that there is a "direct perception by consciousness of the existence of external reality."¹³ On the other hand, mentalists like Berkeley and dualists like Mr. Lovejoy have supposed they could read off from their data that the data are intrinsically non-physical, and Mr. Lovejoy has agreed with Kant that experienced space is intuited to be Euclidean. Once more, it is not necessary to deny that some of the facts alleged may actually be given to experience, but only that the givenness of such facts could constitute or must result in a knowledge that it was the facts described, and not some other facts, which were being given.

A multitude of logical sins of this sort, I suspect, are covered by so-called "phenomenology," not only by Husserl's elaborate doctrine of the intuition of essences and essential relations, but by the looser usage of *Gestalt* psychology which engenders, for instance, such a statement as that "high tones are phenomenologically higher in space than low ones."¹⁴ Any such claim to be able to cognize directly the characters and relations of the phenomenal field vitally affects the theory of perception, because the characters and relations thus revealed are often supposed to be inconsistent with those of the physical world.

4. "If a thing is not known, it can not be given." Of all our four propositions this is probably the most thoroughly embroiled in twentieth-century discussions of the nature and locus of the perceptual datum. Its principle is that if we are in any wise ignorant about any entity, then that entity can not possibly be the datum of consciousness; or, what is the same thing, that nothing can be true about the datum which is not at the time immediately and inerrably known to be true.

Mr. Lovejoy, for instance, has argued that since we must resort to the uncertain devices of physiological inference in order to know about our brains, it is therefore impossible that what is given in conscious experience should be a brain-state.¹⁵ This argument is evidently of the same variety as the one against naturalism, that

¹³ Max Planck, *Where is Science Going?* p. 218.

¹⁴ C. C. Pratt, quoted in the *Psychological Bulletin*, Vol. 29, 1932, p. 655. Comparé Troland, "The world of sense still presents us with the astronomy of the ancients," *Psychophysiology*, Vol. I, p. 72.

¹⁵ *The Revolt Against Dualism*, p. 238. Cp. ten Hoor, this JOURNAL, Vol. XXIX (1932), p. 330.

since our ideas are immediately given to us, and since we have only an uncertain and inferential knowledge about physical things like electrons and protons, therefore our ideas can not consist of physical things like electrons and protons. The most spectacular application, however, of the theorem that if a thing is not correctly known, it can not be given, is the standard argument against epistemological monism or direct realism, the "argument from error," that since our knowledge about physical objects is often mistaken and imperfect, it is impossible that those physical objects should be the actual data of perception. These arguments are all alike in despite of the principle that givenness is not sufficient for knowledge, and are vitiated by it.

There are certain doctrines employed incidentally to the argument against direct realism which are of sufficient independent interest to warrant explicit mention. These are: (a) that secondary qualities are simple, (b) that minds are private, (c) that minds are not spatially extended, and (d) that the perceptual datum is an essence.

(a) It is objected to physical realism that it is nonsense to assert that an experienced color-quality, for instance, is literally identical with the chronogeometrical structure which is its physical condition because it is possible to know the color without knowing the structure. This objection palpably makes the fallacious assumption that something which we do not know about (in this case, a vibrational frequency, let us say) can not be identical with something which is given (in this case, the color).¹⁶

(b) "It is generally admitted that it is absolutely impossible for us to become directly aware of any one else's consciousness."¹⁷ So far as I can find, however, the sole reason for this admission—aside from what indirect substantiation it may get from the general case for dualism—is the fallacious belief that if I do not infallibly know about what is given to me that it is also given to you, then what is given to me can not be what is given to you. As a matter of fact, since even if some parts of my experience *were* also parts of yours, they could hardly be labelled any differently, while even if they were labelled differently, the difference would have to be interpreted, it is no argument against the literal overlapping of

¹⁶ It may still be objected, of course, that although we deem ourselves familiar both with the givenness of colors and with the givenness of relational structures, either of these continues to defy our best endeavors to make it seem like the other. I suspect that this objection also may be resolvable by the principle of the inscrutability of the given.

¹⁷ Moritz Schlick, *College of the Pacific Publications in Philosophy*, Vol. I, 1932, p. 112. The popularity of this assumption continues in spite of Mr. Perry's exposure of its gratuitousness (*Present Philosophical Tendencies*, pp. 286 ff.).

our minds that the knowledge that overlapping had occurred must come, if at all, by the roundabout way of metaphysical hypothesis.

(c) That a mind is not spatially extended is also "one of the commonplaces of reflection." The inevitable ironic retort to the person who thinks otherwise is: "Where, then, is your idea of virtue? What shape is it? Is it larger or smaller than your idea of Jupiter?"¹⁸ These questions patently suppose that if the spatial characters of the given can not be infallibly *known*, the given can not have any spatial characters. On the contrary, I think, the spatial dimensions of a mind, if it had any, could no more be a knowledge about themselves than the spatial dimensions of a book-case are; and it is therefore no argument against the belief that it has them that determinate knowledge about them must come, if at all, by the roundabout way of metaphysical hypothesis.

(d) We have seen it argued from the facts that the composition of the datum, the inter-personal community of the datum, and the spatial characters of the datum, can not be certainly known, that therefore the datum can not be composite, that it can not be common to a plurality of persons, and that it can not have spatial characters. Mr. Strong and Mr. Santayana, however, put the capstone to intuitionist epistemology by arguing from the fact that *none* of the ulterior characters and relations of the datum can be certainly known, that therefore the datum can have no ulterior characters and relations at all. It is an *essence*, non-existent, pure logical aether.¹⁹ It happens that Mr. Strong's use of the argument that he has no knowledge about the spatial and temporal characters of the given, in order to prove that the given has no spatial and temporal characters, is curiously weakened by his previous use, in the same chapter, of an argument that he does have a knowledge of the spatial and temporal characters of the given, in order to prove that the given has spatial and temporal characters different from those imputed to the transcendent physical object.²⁰ But if it is false, as I think it is, that "if a thing is not known, it can not be given," Mr. Strong's two contradictory modes of argument are equally fallacious—although, of course, either one of his conclusions may be perfectly true.

At the point which we have reached, the error which equates givenness with knowledge becomes especially difficult to dissociate

¹⁸ See, for instance, Titchener, *Systematic Psychology: Prolegomena*, p. 156, note; J. S. Moore, *Foundations of Psychology*, pp. 132-133. Strangely enough, both of these men accept a "context" theory of consciousness, which ultimately implies that a mind is an extended system.

¹⁹ Strong, *Essays in Critical Realism*, p. 232; Santayana, *ibid.*, pp. 179-180. By "ulterior characters," above, I mean characters other than the blank "raw feel" of the datum.

²⁰ *Op. cit.*, p. 227.

from the error which Mr. Perry has called "the fallacy of exclusive particularity." This is an unintentional form of the ancient Megarian sophism that what is *A* can not be *B*, and consists in ignoring or denying the capacity of one identical entity to possess more than one character or relation. Since the given is innocent or inscrutable in the way we have seen, the problem of the nature of the given offers golden opportunity for this error. Contexts and characters which are given with the given, for instance, or more or less sagaciously conjectured for it, are taken to be the only ones it can own. There are men, for instance, who feel that if a thing is a "datum," then a datum is all it can be, and they are bewildered by the suggestion that the word "datum" can denote an actual self-identical thing which may possess any number of characters and relations in addition either to its character of givenness or to the other characters given with it. The claims that the datum is uncomposited, unsharable, unextended, and indeed non-existent, seem to have been instances of this fallacy.²¹

The first part of this essay has expounded the proposition that the givenness of a thing to conscious experience is neither equivalent nor necessary nor sufficient to knowledge about that thing. Phenomenological introspection, critical epistemology, and philosophical tradition all testify that the given is innocent and ambiguous, with the inscrutable ultimacy of sheer fact. The purpose of the second part of the essay was to portray how the principle that givenness is not knowledge is portentous for metaphysics and theory of knowledge. The portrayal should have a dual result, first, to make more obvious the truth of the innocence or inscrutability of the given, and second, to discredit the philosophical contentions which contravene that truth.

I make no bones about the cursory incompleteness of my argument. The first part, for instance, patently requires a more detailed analysis of meaning and of knowledge, and the second part scarcely suggests the complex and interesting impact of our prin-

²¹ That a thing can possess more than one character or relation is, as Mr. Lovejoy mordantly remarks (*Revolt*, p. 46), generally recognized by most people in most connections. All the more blame to them, then, that it is not more recognized, even by Mr. Lovejoy, in connection with the possibility of plural rôles for the consciously given. The pragmatists, I think, sometimes commit the fallacy not only to assert that what is not known can not be given, but also to assert that what is known can not be given. Thus Mr. Dewey, in his *Influence of Darwin and Experimental Logic*, means by "datum" the simple selected element which sophisticated science finally *takes for* (knows as?) a datum; and then assumes that such entity's being so "taken" exhausts its nature, so that it can not possibly be identified either with the initial occasion which historically really did provoke the instance of knowledge in which it occurs, or with the eventual object which the knowledge really is "about." Mr. Schiller's intention seems to be similar, this *JOURNAL*, Volume XXX (1933), pp. 488-494.

ciple on the pretended refutations both of monism and of dualism. For the present, I can hope only to guard against the grossest misunderstandings. I especially dread lest an argument which is intended to support only what Peirce called "a contrite fallibilism" should be interpreted either as mere bombastic nihilism, as skepticism, or as subjectivism.

If I were pretending, for instance, that the principle of the innocence of the given annihilates the positive theories of all the philosophers I have criticized, a fair retort might be that I had only succeeded in annihilating myself and my principle. On the contrary, however, I have for the most part pretended only to destroy a showy type of argument by which these philosophers themselves had pretended, to the unholy joy of the layman, that they had annihilated the positive theories of each other.

The rival theories, however, are saved from apodictic damnation only to be subjected to the purgatory of inductive research, and our result does not mean the weak and tolerant skepticism or eclecticism which is the obverse of irresponsible dogmatism. If beliefs about the given can not be judged with the blinding immediacy of intuition or the solemn necessity of pure reason, then they must be appraised indirectly and at long last as they accord with the most likely view of the scheme of things. The given is inscrutable in that it is not, and never will acquire, an infallible account of itself. But it is not indeterminate, it is not mere $\epsilon\lambda\eta$, and year by year its ambiguous but unarguable contours wear to a finer fit the instruments with which we meet them.

Finally, therefore, and most of all, our position does not mean subjectivism. That we *construct our beliefs* seems to me the safest of all the beliefs which a mind can construct. But that there is an obdurate world of nature to which successful beliefs must conform seems to me also a very proper and workmanlike belief, while to construct the contrary belief that in constructing its beliefs the mind is constructing the world seems to me a ruinous defiance of all the laws of the art.

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BOOK REVIEWS

Law and the Social Order. MORRIS R. COHEN. New York: Harcourt, Brace and Company. 1933. Pp. xii + 403.

Ethical Systems and Legal Ideals: An Essay on the Foundation of Legal Criticism. FELIX S. COHEN. New York: Falcon Press. 1933. Pp. xi + 303.

The first of these volumes brings together the many essays and reviews on legal themes which Professor Cohen has contributed to

various journals through a period of twenty years. Naturally some of these have more permanent interest and value than others, but they represent a steady and consistent attack upon certain dogmas and attitudes which have resisted the progress of jurisprudence toward a broader and more humane function in present society.

One such dogma is that of the separate spheres of law and ethics. To a certain degree this is an incident of the separation between government and ethics and between the economic world and ethics which has obtained in modern society. Philosophy as well as law has seemed to accept the separation, if we limit philosophy to what is written by professional philosophers; for Professor Cohen enjoys the distinction of being almost the sole recent philosopher who has ventured into the field of jurisprudence.

Unquestionably the complexity of law under modern conditions has offered an almost impassable barrier to lay criticism of a quality that can claim recognition from the legal profession. Yet philosophy has suffered by its progressive withdrawal from field after field of broadly human interest, and despite the philosophic minds within the legal profession that have devoted great learning and power to the search for legal principles and to their development in the administration of justice, Professor Cohen well argues that no profession can afford to hold itself immune from outside responsibility and criticism, especially in a society whose legislative and administrative offices as well as its judiciary are almost entirely in the hands of lawyers.

Another dogma which Professor Cohen attacks with vigor is what he styles the "phonograph" theory—the theory that judges "find," but do not "make" law. This theory "had frequently been shown by intelligent jurists since the days of Austin to be a fiction." But the leaders of the American Bar, whether in defence of their immunity or from ignorance, have aimed to convince the public that as for the judge, "It is not his function or within his power to enlarge or improve or change the law." The reason for opposing this phonograph theory is, in the author's opinion, because "discussion of our political life can not have much reality while we talk of democracy and the will of the people, and our actual government remains an irresponsible judicial aristocracy. A small number of judges can, under the guise of interpreting the law, settle for a long time any vital issue in accordance with their own class bias or antiquated opinion as to social and economic needs." The discussion that took place in the United States Senate on occasion of the nomination to the Supreme Bench of a candidate believed to hold certain views as to Negroes and Union Labor would seem to show that the fiction in question is no longer credited in that body.

Professor Cohen may feel that his labors in the cause were not in vain.

If I were seeking a quibble on which to express dissent, I should query whether in his polemic against the dualistic metaphysics of nominalism Professor Cohen does not imply a similar dualism in the separation of the objective world from the organizing intelligence when he claims as the position of "logical realism," that "abstract rules of relation are to be found in the very objective world in which are located the things related"—unless he postulates that the "things related" and "the objective world" are equally abstract, with all the implications for metaphysics which go with abstractions (p. 226). In any case, when the "rules" in question are not the descriptive rules of science, but the regulative rules of law, it does not seem appropriate to the cause for which Professor Cohen is contending elsewhere to urge the abstract existence of such rules, if by "abstract" we are to understand "independent of judicial interpretation." But my general sympathy is so strongly with the author in his efforts to liberalize the law in its philosophy and administration that I am not strongly interested in the quibble. It would be a welcome consequence of the publication of this volume if some of the younger men in philosophy should find incentive to join Professor Cohen in this field in which he has worked so fruitfully.

In *Ethical Systems and Legal Ideals* Dr. Felix Cohen, writing from the point of view of a lawyer, opposes vigorously the divorce between law and ethics, and attacks the tendency of the legal profession to substitute "æsthetic harmonies within the system" for the older criticism of a universal moral science. He holds that "law has instrumental value in so far as it promotes good human activity, or more briefly, the good life." Legal criticism should use on the one hand pure ethics, on the other all the natural and social sciences that explain the life of man. In working out the more definite formulation of the ethical standard, the author argues for the reduction of all such categories as right, ought, etc., to the final class "good," and then for the hedonistic test of good. Both these reductions are, of course, dealing with time-worn controversies. They suggest the question whether the author's purpose of commending to the legal profession a recognition of moral values as supreme standards of criticism would be more effectively furthered if it were not tied up with a disputed theory of the relation between right and good, and with a hedonistic analysis of good. Few of the world's deeper thinkers have found this hedonistic analysis an adequate measure of the worth of the manifold values of human experience. It also seems hard on Herbert Spencer, Sidgwick, and Green, to say

nothing of more recent writers, to assert, "It would not be unfair to say that no avowed ethical philosopher in the last hundred years has made a single fundamental criticism of the established institutions of modern society." Nevertheless, if this assertion is too absolute it is certainly true that recent philosophy has had little to say upon social institutions, as compared with its output in metaphysics and epistemology. Those who regret the shrinking of philosophy's interests as unfortunate for both philosophy and the social disciplines may well extend a friendly welcome to an ally, who by his training is fitted to work fruitfully in law and ethics. In law, as in other fields, the worker who can "bore from within" occupies a strategic position.

J. H. TUFTS.

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The Meaning and Truth of Religion. EUGENE WILLIAM LYMAN.
New York and London: Charles Scribner's Sons. 1933. Pp.
xvi + 468.

Professor Lyman has in this volume made another valuable contribution to the philosophy of religion. Enough of what he says is intelligible to every one to enable all interested in the subject to read him with pleasure and profit, while he offers much of worth to the advanced student. He largely develops his own thought in criticisms and evaluations of other recent and contemporary authorities, and is so clear and accurate in stating the positions of others that I have found only one passage in which he seems to me to misinterpret another writer. The volume can therefore be recommended as a good grounding book for beginners. On the other hand, it is a book which no specialist in this field can afford to overlook.

Professor Lyman does not attempt to formulate a precise logical definition of religion. In the portions of the book that deal primarily with "the meaning of religion" he puts most stress on the ethical type of religion, although he also discusses the mystical, esthetic, and metaphysical types and affirms that religion at its best is a synthesis of all four. The supreme principle of ethics is "the fullest development of every human personality through the coöperative creation of a world-wide community of persons" (p. 181). This principle he conceives realistically, and apparently regards as absolute and eternal. However, his is "a pragmatic realism because it shares in the pragmatic emphasis upon development, progress, reconstruction, and creative thought and action" (p. 194). Against Professor Dewey and others, he denies that the function of religion is necessarily limited to the conservation of already exist-

ent values; it should be and often is creative, bringing new values into existence, and it is prepared to perform a constructive service in the social movements of our time (pp. 14ff, Chap. XVIII). Perhaps Professor Lyman's closest approximation to a definition of religion is his statement that the supreme principle of religion is "*the maximum of harmonious interaction between the personalities of men and the Deepest Reality of the universe*" (p. 86, italics in original; cf. p. 74). This "Deepest Reality," he goes on to make clear, is God. God exists in a realistic sense, independent of human thought and action, and it is through communion between men and God that the function of religion is performed.

A theistic philosophy of religion of course rests upon a metaphysic. This Professor Lyman fully realizes. Among the metaphysical discussions in this volume that particularly deserve commendation are the criticisms of pantheism and naturalism, the interpretations of the new cosmology and evolution in their bearings on religion, the arguments for freedom and immortality, and the treatment of the problem of evil.

Professor Lyman nowhere assembles his various metaphysical positions in a compact statement. This leaves a somewhat embarrassing task to a reviewer who wishes to convey some impression of his philosophy as a whole. I shall, however, attempt to make such a statement in the following paragraph. In doing so I must use my own vocabulary, and what I shall say will in part be interpretation rather than exposition.

The general position taken is realistic as opposed to idealism, and theistic as opposed to pantheism, phenomenism, and humanism. Goodness, Truth, and Beauty are claimed to have eternal validity independent of all human (and I think that the author would add, Divine) volition. Unending time is an existent reality, independent of men (and, I think he means, of the will of God. I am not clear as to the status of space; some passages seem to incline to a Bergsonian view). God in time endlessly creates existent material objects, organisms, and persons. He is both transcendent with reference to His creation and immanent within it, directing its progress toward the realization of values in the world of existence. The world of His creation is in some ways contingent; the new developments in physics and other sciences furnish factual evidence of this. Moreover, one of the eternal values is personality, which implies free moral agency in the sense of indeterminism. God creates personalities in the existent world. These personalities are free. Freedom implies indeterminism in human volition, and could only take place within such a physical universe as ours, in which there is partial contingency and indeterminacy, and scien-

tific laws are merely statistical averages. Since human personalities are free, and natural processes are in part contingent, Divine foreknowledge of future events is limited. Physical evil is inevitable in a contingent world, as well as the *possibility* of moral evil (sin). The *actuality* of the latter is exclusively the result of the free choice of men. Men should, and with Divine assistance can, overcome both kinds of evil and turn them into good; to do this is the ethical function of religion. Although the human organism has evolved from inorganic matter, and the human soul from the psychical phase of matter (panpsychism), the soul is nevertheless independent of matter, and is immortal. An apparently dualistic theory of the relation between the mind and the body is defended, and acceptance of interactionism is explicitly affirmed in a manner that reminds one, in some ways at least, as much of McDougall's *Body and Mind*, which Professor Lyman does not cite, as of Bergson's books, which he does.

In such a metaphysic every friend of religion will find much that is congenial. Personally I am willing to accept most of it. There are points, however, on which some of us may feel disposed to take issue. Professor R. B. Perry has taught us that values in existence are objects of interest to organisms; while Professor S. Alexander has shown that truth is the contemplation of independently existing facts, that moral good is action directed toward changing objects in accordance with our purposes, and that beauty is our subjective emotions imaginatively but not deludedly attributed to objects. What is gained by abstracting existent values such as these from the situations in which they are experienced, and hypostatizing them as eternal? Values certainly change for men as their experiences become enriched; is it not reasonable to suppose that they also develop in the ever enlarging experience of God (who for Professor Lyman is a Person that does not have complete foreknowledge)? Does moral responsibility inevitably imply indeterminism? There are difficulties either way, of course; but is it not at least equally reasonable to suppose with the self-determinists that a man is responsible rather for what his character prompts him to do than for "free" choices not determined by his self? Is anything gained by the hypothesis of pansychism? If we are to take emergent evolution seriously, life and mind when they emerge on their characteristic levels have new properties and qualities; had we not better acknowledge emergence with natural piety, and avoid the idealistic fallacy of imputing life and mind to the lower levels in some implicit sense which can not be made clear and which in no way accounts for the rise of the higher levels? Is it not enough to posit God transcendent to the lower levels and

yet immanent in them, and causing the higher levels to emerge? Why posit upon the lower levels other life and mind than God?

Professor Lyman has certainly contributed a brilliant, interesting, constructive, and thought-provoking treatise upon the philosophy of religion. The book is characterized throughout by an attitude of eloquent appreciation which can not fail to make the most skeptical and fault-finding philosophical reader feel more kindly disposed to religion.

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Towards the Understanding of Karl Marx. A Revolutionary Interpretation. SIDNEY HOOK. New York: The John Day Company. 1933. Pp. xiv + 348.

Nearly all commentators upon the philosophy of Karl Marx have been troubled by two motives or tendencies in it which were difficult or even impossible to make compatible. On the one hand Marx appeared to be offering what purported to be a quite objective analysis of society and a detached, even a mechanistic, theory of social change. To this phase of the system belonged the economic interpretation of history with the thesis that the mode of producing and distributing goods is basic to the whole legal, moral, and political order, the theory that capitalism is supported by the expropriation of surplus value and must therefore produce a higher and higher degree of poverty, a sharper and sharper stratification of society, and eventually its own downfall. All this appeared to be presented as a dialectical development which proceeded with strict logical necessity. But, on the other hand, Marx was a propagandist, an organizer of movements, the creator of effective party-socialism, and a sharer in revolution. From the second point of view the evolution of society must be considered by no means inevitable; the triumph of the proletariat and the inauguration of a classless society depends upon the passionate loyalty of the workers to an ideal.

In the book before us Professor Hook has undertaken to solve this apparent discrepancy and to present a "revolutionary interpretation" that shall restore Marxism to the unity which the personality of its founder is assumed to have had. In a sense, then, the book aims to rescue Marx from his purblind critics, for the author refuses to countenance any explanation so simple as that Marx was not clear. His successors in the socialist tradition were not intellectually powerful enough to grasp all sides of the master's thought; hence they divided and stultified it—as the mechanical materialism of German orthodox socialism, as the liberal revision-

ism of Bernstein, or as the irrationalism of the French syndicalists. In another sense, however, nothing is farther from the author's intention than a mere return to the historical Marx; relatively little space is devoted to pure exposition and almost none to biography. Professor Hook certainly intends that his book shall be primarily a document in the present-day growth and spread of revolutionary socialism, a continuation of the "Marxian reformation" which he attributes to Rosa Luxemburg and Lenin.

Now the purpose of all that Marx did and wrote was "the revolutionary overthrow of the existing social order," and it is this purpose which draws his work together and makes it one. This is true in a biographical sense and also, as Professor Hook apparently desires to show, in a methodological sense; it is the purpose which made Marx's social philosophy validly a unit.

Social science is class science; and what Marx means by science is not what is meant by the word today, but *criticism based on the observable tendencies of social development*. The scientific approach to society involves the continuous application of ideals to the functioning of institutions and the continuous testing of those ideals by the social consequences of their application [p. 69].

This characteristic of social criticism (or social science, if it is to be called so) Professor Hook identifies with the dialectical method, and this he accordingly regards as the most characteristic feature of Marx's thought, since dialectic links purpose with objective (social and natural) fact.

From objective *conditions*, social and natural (thesis), there arises human *needs and purposes* which, in recognizing the objective possibilities in a given situation (antithesis) set up a course of *action* (synthesis) designed to actualize these possibilities [p. 84].

As Professor Hook interprets it, therefore, dialectic is not a general logical method, but a peculiarity of the social disciplines, arising from the prevalence of felt need among the data of these subjects. From this interpretation he deduces a sort of pragmatic test of truth:

In order to discover whether our ideas are true, we must act on them. In acting on them we change the external environment. The true idea, then, is one which is validated by the outcome of the interaction between our practical activity, which expresses the meaning of the idea, and the external object, which calls it forth [p. 103].

In the case of social questions it follows that "the criteria by which its success is judged will vary with the economic interests of the class which passes judgment" (p. 105).

If it were Professor Hook's purpose to prove that social studies are subject to a special principle of indetermination, his argument

would be very strong. The knowing of social fact sets in motion purposes which change the fact under observation; the observation is motived by purposes which also are subject to change as a result of the observation. That something of this sort is very likely to happen with social problems of large dimension seems to be undeniable, but surely the only deduction to be drawn is that large problems of social valuation and causation are insoluble. But this conclusion would be as unwelcome to Professor Hook as to Hegel or Marx. By calling dialectic a "method" he apparently means to suggest that a problem can be solved by the very lack of determinancy which prevents it from being stated. There is indeed historical justification for believing with Professor Hook that dialectic was an amalgamation of purpose and fact, or purpose and logic, but this only proves that dialectic was not a logical method, but an art of propagating moral and religious convictions. Its necessity lay in the belief that some values are too fundamental to fail. But the amalgamation was none the less a confusion, a peculiarly sophisticated combination of logical, causal, and moral necessity.

The puzzling feature of Professor Hook's book is that he apparently thinks that he can make all these distinctions and at the same time validate dialectic as a method. Thus he makes an apparently clean-cut distinction between actualities and possibilities, and between the historically contingent and the necessary. He concedes that it is nonsense to talk about "class-truths" and that a value can never be described as true or false. And yet, in the dialectic all these seem somehow to be tied together by the "revolutionary will of the proletariat."

Because we want to change the economic structure of society, we assert that this evidence from the *past* together with our revolutionary act in the *present* constitutes a sufficient cause for believing that the general proposition, "in the last instance the mode of economic production determines the general character of social life," will be true in the near *future*. In other words, the test of truth of historical judgments about the past is to be sought in the concrete historical activities of the present, and their future results [pp. 181 f.].

Surely this is as mystical as anything in Hegel. How can a present will make the past anything but what it was, or even prove that it was one thing rather than another? Of course, if a revolutionary will is known inductively to follow only upon specified conditions, the existence of the will does imply the existence of the conditions, but it is mere puzzlement to suggest that this has anything to do with its being a will.

The same confusion is spread at large over Professor Hook's analysis of the labor theory of value and the revolutionary conse-

quences supposed to flow from it. He admits that no theory of value can be proved or disproved logically and that an observed economic phenomenon can be analyzed in terms of several alternative theories (pp. 215 f.). Still, "the labor theory of value is worth saving if the struggle against capitalism is worth the fight." "In its full implications it can be grasped only by one who has accepted the class struggle from the standpoint of the working class and thrown himself into its struggles" (p. 223). In plain language, this seems to mean that "the revolutionary will of the proletariat" permits one to deduce the class struggle from the labor theory of value and prove the labor theory of value from the fact that one wills to believe in the class struggle. But in the following chapters the author certainly develops the theory of class struggle exactly as if the theory of surplus value were *true*, with no alternatives about it. Here he uses the political party to bridge the gap; it exists to foster class consciousness and to make "explicit what is implied in the struggle of the masses" (p. 238). But if economic analyses may be as different as distinct geometries (as the author has said), something different evidently "is implied" for each. Economic necessity may determine the choice of system by proletarian and capitalist, but then it is idle to speak of choice or to suggest that there is some magic in the word action to explain away its inevitableness. On the other hand, if values depend upon the frame of reference chosen, it is naïve to suppose that the proletarian's choice must be preferred. In short, if you fuse values and facts to get a dialectic, you can not avoid inevitability; if you do not fuse facts and values, you never get a dialectic.

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Le Temps et l'Éternité chez Plotin et Saint Augustin. JEAN GUITTON. Paris: Boivin et Cie. xxiv + 363 pp.

M. Guitton presents this study as an example of the method which he believes should be used in investigating and constructing the history of ideas. In the introduction he discusses the difficulty of this species of history and adumbrates a methodology which can be judged by its results in the study he has made of the problem of time in Augustine's thought. This problem he has chosen because of its metaphysical, anthropological, and moral implications and has sought to write a history of Augustine as a man and a thinker whose development is everywhere to be interpreted according to his growing comprehension of the true and essential relationship of time and eternity. Every reader must be impressed with M. Guitton's vast erudition and acute insight as well as with

his dexterity in constructing the results of his study in such a way that the development of his exposition seems to become the natural development of Augustine's mental and moral history. But it is this very plausibility which, after the whole has been finished, fades to the color of speciousness. In part this is due to the very nature of the subject. One is made so painfully aware of the presence of the problem of time in every possible sphere of thought that in the end it seems to be no more radical for Augustine than for any other thinker; and, if this be so, it seems either that the whole history of ideas should follow the table of contents of this book or else that this is only another analysis—however true—and not the unique and necessary history which the author implies it is. It may be that, in asking for more, one demands too much, but M. Guitton himself encourages us to do so; and his summary of Augustine's interpretation of Plotinus may, I feel, with justice be applied to his own interpretations of Augustine: "il trouvait en Plotin, non pas le vrai Plotin de l'histoire, mais l'image parfaite de ce qu'il voulait sans le savoir, ou mieux de ce qu'il voulait penser sans le pouvoir." It may be this which causes him now and again to discard his own shrewd analysis of Augustine's character in order to bow to Augustine's doctrines, in defense of which he will use as a final argument even the stale *consensus gentium*. Frequently his terminology, too, which seems at first to be so fruitful, finally becomes a screen against unpleasant interpretation. In Chapter IX there is an example of this, which at the same time shows how cleverly he centralizes his study. The four chief objects of Augustine's polemic which were also the four great influences on his own development, the Manichaeans, the Donatists, the Neoplatonists, the Pelagians, all interested him chiefly because they raised four different metaphysical difficulties concerning time. His study of their doctrines enabled Augustine to construct a theory of time adequate to answer the following enigmas: (1) the duality of time and the duration *ante Christum*, (2) the duration *post Christum*, (3) the passage of the temporal into the eternal, (4) the infusion of eternity into time without the absorption of time by eternity. This last was the problem raised by Pelagius, yet M. Guitton sees clearly that Augustine's real quarrel with Pelagius rested on the fact that, if the monk was right, his own "experience" was meaningless. But this obviously exact explanation is masked with the terms "le temps personnel" and "le temps universel."

The discussion of various aspects of time is, however, frequently illuminating, as when it enables the author to explain that Plotinus's antagonism to the gnostic mythology, and so to orthodox Christianity, was due to the reality of time which is posited as the basis of the Christian myths. The bitter debates in the schools over the

meaning of the "Timæus myth" were due to a failure to understand that "mythical time" is unhistorical, symbolizing a state and not an act. Strangely, though, M. Guitton seems to forget this a hundred pages later when he cites with approval Augustine's argument that the eternity of the world is contrary to the spirit of Platonism.

Plotinus's principle of production by inversion of essence—which he seems rightly to interpret as a mystical interpretation of Aristotle's doctrine of motion from opposite to opposite—he calls his system of "conversion" and to this attaches his account of Augustine, for whom the conception of the incarnate Word is the conversion of the soul from time to eternity. This relationship of time and eternity, which M. Guitton considers satisfactory, is incomprehensible without the experience of conversion, so that time is comprehensible only to the soul that has turned to God. Still we are told that Augustine's system makes clear "the operation of eternity in time," though how this is possible, on the premises, without the act of Grace I do not see.

The truth is that for all the Greeks, including Plotinus, time and eternity are opposites of which you can partake of one only, and that is why Plotinus must have the soul slough off all that is tainted with the temporal if it is to accomplish "the flight to the alone." M. Guitton's attempt to save both Grace and moral action for Augustine by insisting that time and eternity are essentially different and of different orders results merely in making eternity an "inscrutable attribute of God" and estops Augustine as well as all other men from basing doctrine on the nature of that concept. The true sense of Augustine's answers to all these questions is that in God contraries are identified, and it is this doctrine which separates him from all the Greeks. Even Plotinus could not accept it, and his writings show a constant struggle to raise a superstructure of mysticism without this necessary foundation. He thought he had found a way to do it by means of emanations.

That M. Guitton's study is a model for all future histories of ideas I can not admit; but I mean to have made perfectly clear that it is worth the careful study of all historians of philosophy.

HAROLD CHERNISS.

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Individualism: An American Way of Life. HORACE M. KALLEN.
New York: 1933. 241 pp.

What are the ideals of American individualism? In what sense is "rugged individualism" a corruption, and how can a government interfering with everyman's business maintain them? Kal-

len's book was written before the Nira program had gotten under way, and was not designed directly to consider this question in every one's mind. But in tracing the components of our national philosophy, its deviations and enlightened applications, his book serves, better than any other that I know, to answer the question.

Kallen is that rare philosopher, a pious pragmatist. The James in him is tempered by the Santayana. His experimentalism proceeds out of a reverent attachment to three great traditions: his Jewish heritage, the Harvard school, and the "American adventure." In *Culture and Democracy in the United States*, he had already considered some of the issues which he here treats more comprehensively, with historical perspective, and in a somewhat evangelical temper. This book emerged as an immediate issue of conversations with John Dewey (who was to have been a collaborator) and the joint conviction that in the present distress the "greatest easing would probably come from an analysis of fundamental ideas and convictions," and not by multiplying solutions and adding one to the panaceas.

"In the classic tradition of America, the Individual comes first, the establishments of society come second; the freedom and fellowship of individuals is the goal, the institutions of government, religion and affairs are but instruments to attain this goal, valid not by what they are but by what they do." American democracy professedly makes for the self-fulfillment of every individual citizen, an end to which all social agencies are merely contributory. That is not only the recognizable American ideal, but it comports with Kallen's acknowledged personal bias and his inheritance from James. Thus his book is a matured personal credo as well as a delineation of the "American way of life," and its title is entirely justified.

How much confusion has been introduced into modern thought by the circumstance that in German all nouns are spelt with capital letters is distressing to contemplate, but certainly we have a right to grow suspicious when we find "Individual" abstracted, as here, and spelt with a big *I*. There is a sense, of course, in which all social arrangements are referable to the individual, and, as Dewey has pointed out, instrumental experimentalism tends to bring the individual into prominence, for he is the "carrier of creative thought, the author of action and its application." It is well not to forget, too, that we come into the world alone and leave it alone, an indefeasible self. But all through life we huddle against one another; we would and must live together. The particular social channels are our own contrivance, but social relations are continuous. How can there be a vicious isolation of either the individual or the social? Is it possible to make a primacy? Can fruit-

ful thinking fail to recognize an ultimate interdependence? I think there is only one answer; nevertheless it remains true that the characteristic American mode of attack is in terms of a disproportionately individualistic ideal, and the Nira program is moving accordingly. As Mr. Berle recently put it:

"In times of stress the methods assumed are pretty apt to hark back to national habit; and . . . it is to the everlasting credit of the United States that at a time when the collective unit might easily have swallowed everything, the private lives of a great number of men and women furnished the real basis of action."

For those who would still proceed in continuity with the momentum of the past, striving with a kind of desperation, as Tugwell suggests, to rebuild the station while the trains are still running, it is necessary to reinterpret the traditional ideal in terms of contemporary needs. It is one of the main vocations of the philosopher to make this mediation, and those who object to the "racket of redefinition" are likely to leave the fold. Kallen ably addresses himself to the task. Thus we are shown how Mr. Hoover objected to a dole because it would tend to degrade the rugged individualism of the American people, who are presumably able to look after themselves and, if need be, one another privately. That a high tariff and public education are as much of a dole as free soup are exceptions which support the Republican rule. But there is a sense in which the government may intervene precisely in order to safeguard the individualism of the average citizen. Individualism, as Kallen indicates, may require a form of socialism as an instrument for its perpetuation. Thus Mr. Justice Brandeis, whom Kallen approvingly cites and who in turn cites Kallen in a recent dissenting decision (*Liggett vs. Lee*) argues there that the state may impose a special discriminatory tax on a large chain-store organization in order to equalize the chances of the small business man. It is the American way to insure the rights of the otherwise forgotten man in the competitive struggle. But the majority of the court held to the catch-as-catch-can theory. A policy which made for freedom of enterprise in pioneering times becomes a force of exploitation under the dominance of a few monopolistic corporations. By a similar fatuity, minimum wage laws were opposed as hampering the privilege of the worker to dispose of his services as he sees fit. Thus we can see the strides made under the recovery program, and the sense in which, as Professor Overstreet makes clear in his *We Move in New Directions*, we are now straight up against the challenge of industrial democracy. This is the new frontier, and it remains problematic whether the difficulties can be overcome in the brave efforts of the pragmatic brains trust moving along American lines.

In a world perspective, Kallen's analysis, which is also a plea, seems mild, even timid and too sweetly reasonable. Of that he is himself aware (as I judge from a letter to *Books*) and there are many who believe he is defending a lost cause. Yet quite aside from the values which he exalts (which it might be demonstrated are identical with those of a putative classless society), his book is immensely helpful in getting under current shibboleths to basic trends, showing how the American type was created by "Calvinism reshaped as Rousseauism." As far as I know, it serves this purpose uniquely. I should add that my Introduction class, while admiring its positive and hearty strain, found it a little too fourth-of-july, which is understandable in view of its composition in the form of impassioned, often eloquent, sometimes magniloquent, manifestoes.

BERYL HAROLD LEVY.

COLLEGE OF THE CITY OF NEW YORK.

The Orient in American Transcendentalism. A Study of Emerson, Thoreau, and Alcott. ARTHUR CHRISTY. New York: Columbia University Press. 1932. xvi + 382 pp.

The problem which Dr. Christy has attempted to solve is an important one for the student of American religious and philosophic thought, for undoubtedly Transcendentalism has played a deeply significant part in the intellectual development of a young nation. The student of this strangely eclectic philosophy too often suffers from an inability to put his finger upon its exact sources. This book, well documented and explicit, should prove extremely useful in solving the dilemma. It is unfortunate that the great bulk of the book is devoted to Emerson, and only a brief seventy-odd pages are left for Thoreau and Alcott,—the two who really tried to *live* their Orientalism. But the treatment of Emerson is compensatingly thorough. There seems to be, however, a tendency to attribute a bit too much of his philosophy to Oriental sources. Emerson was not troubled by the need for logical consistency which torments the Hindu seer. Thus we see him tripping delicately through the world's jungles of thought, like a giraffe nipping off the topmost tender shoots from every tree, but never biting into the tough bark beneath.

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JOURNALS AND NEW BOOKS

* MIND. Vol. XLII, No. 168. A Defence of Free-thinking in Logistics Resumed: H. W. B. Joseph. The Distinction between

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BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 32 Année, No. 5. Troisième Centenaire de la Naissance de Spinoza. Séance du 26 Novembre, 1932. Communications de MM. Ch. Appuhn, Léon Brunschvicg, Carl Gebhardt. Discussion: MM. Bouglé, Rivaud, Rodrigues. Lettre de M. R. Lenoir.

GIORNALE CRITICO DELLA FILOSOFIA ITALIANA. Anno XIV, Seconda Serie, Volume 1. La Poetica del Convito: *L. Stefanini*. Averroismo e platonismo in Italia: *B. Kischowski*. Filosofia e scienza: *A. Giannotti*. La crisi contemporanea e il bisogno di una nuova filosofia: *F. Brunelli*.

SCIENTIA. Vol. LIV, N. CCLVII-9. Theophrastus Paracelsus: *F. Strunz*. La diffusion de la lumière, phénomène de modulation: *Gr. Landsberg*. Il concetto di "specie" nei microrganismi parassiti Parte II^a: *R. Ciferri*. Is Comparative Psychology an "Objective" Science?: *E. S. Russell*. La transition d'un art à une science: empirisme et recherche scientifique en agriculture: *E. J. Russell*. (Vol. LIV, N. CCLVIII-10.) La radiometeorologia: *F. Lori*. Ueber die Zusammensetzung der Atome: *A. Korn*. Some Chemical Aspects of Life. Food and Evolution: *J. Alexander*. L'étude des légendes dans la méthodologie de l'histoire ancienne: *J. Bayet*.

Barié, G. E.: La Spiritualità dell'Essere e Leibniz. Padova: Casa Editrice Dott. Antonio Milani. 1933. 553 pp.

Brameld, Theodore B.: A Philosophic Approach to Communism. Chicago: University of Chicago Press. 1933. xi + 242 pp. \$2.50.

Centre International de Synthèse: Troisième Semaine Internationale de Synthèse. L'Individualité. Exposés par Maurice Caullery, C. Bouglé, Pierre Janet, J. Piaget, Lucien Febvre. Discussions. Paris: Félix Alcan. 1933. 156 pp. 15 fr.

Conger, George Perrigo: The Horizons of Thought. A Study in the Dualities of Thinking. Princeton: Princeton University Press. 1933. x + 367 pp. \$5.00.

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Déjean, Renée: L'Émotion. (Bibliothèque de Philosophie Contemporaine.) Paris: Félix Alcan. 1933. 261 pp.

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Schneider, Elizabeth. *The Aesthetics of William Hazlitt. A Study of the Philosophical Basis of his Criticism.* Philadelphia: University of Pennsylvania Press. 1933. 200 pp. \$2.00.

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Veuthey, P. Léon: *Metaphysique d'Experience. Essai d'Adaptation moderne de la Pensée Franciscaine d'après le P. Girard, O.F.M. Conv.* Assisi: Casa editrice francescana. 1933. 117 p.

NOTES AND NEWS

Hermann Weyl, Professor of Mathematics at the University of Göttingen, will give a series of lectures under the William J. Cooper Foundation, Swarthmore College, October 27, November 3, 10, 17, and 23, at 8:15 p.m. The general subject is *Mind and Nature* and the titles of the individual lectures are as follows: Subjective Elements in Sense Perception; World and Consciousness; Constructive Character of Scientific Concepts and Theories; Relativity; Subject and Object in Quantum Physics.

William Ernest Hocking, Professor of Philosophy at Harvard University, will present a lecture series on "The West and the Spiritual Life of Asia" under the Charles F. Deems Lectureship in Philosophy at New York University, Washington Square East, New York City, on Mondays, November 6, 13, 20, and 27, December 4 and 11, at 4:15 p.m.

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Book Reviews. Journals and New Books. Notes and News.

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Volume XXX. No. 21. October 12, 1933.

Naturalism and Agnosticism in Santayana.
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Report of the Chicago Meeting of the American Philosophical Association. HAROLD A. LARRABEE.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 22. October 26, 1933.

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THE JOURNAL OF PHILOSOPHY

STUDIES IN THE STRUCTURE OF SYSTEMS

5. THE NATURE AND FUNCTION OF DEFINITIONS IN A DEDUCTIVE SYSTEM¹

SOCRATES invented the method of defining; Plato added the method of division and classification; and Aristotle determined the nature and function of definitions in a deductive system. In his disposition of the structural elements, definitions are treated on a par with axioms as immediate principles of syllogisms. The axioms are the *koinai* from which proofs flow; definitions are the *idiai*, *to genos to hypokaimenon*. Or, according to a different passage in the Analytics, the "immediate principle" of the conclusion is either an axiom or a "thesis"; and the latter is an "hypothesis" (if it is concerned with a "that") or a "definition" (if it is concerned with a "what"). In the Aristotelian Theory definitions are integral parts of a deductive system. And this theory of the function of a definition follows consistently from his theory of the nature of a definition: it is "the expression of what a thing is"; and consequently it is the *peri ho* of the proof.

In this theory Aristotle followed the Socratic-Platonic teaching. It was adopted by Euclid, whose Elements are for the nature and function of definitions, as well as for the other structural elements of a deductive system, the living pattern for the succeeding generations.

The moderns, especially the mathematicians, have completely departed from the classical tradition. Their theory is essentially that of Pascal; definitions in geometry are, according to him, mere nominal definitions; they merely give to things (which are clearly designated in terms wholly known) a name. And thus Mr. Peano in the paper "Les Définitions Mathématiques"² which he presented at the International Congress of Philosophy, writes: "Une définition . . . est une égalité dont le premier membre est un mot, ou

¹ With this paper I am continuing the publication of studies the substance of which was first presented over twenty years ago in a course of lectures at Harvard University. The preceding papers appeared in this JOURNAL, Vol. IX, pp. 197, 317, 431; Vol. X, p. 64.

² *Logique et Histoire des Sciences: Bibliothèque du Congrès International de Philosophie*. Paris, 1900. Vol. III, p. 283.

signe, qui ne figure pas dans le second." Mr. Peano and others (e.g., Mr. Louis Couturat³) emphasize the form of an "equation"; this is not merely a form which a definition may or may not have. No! Only equations can be definitions. "... une proposition qui n'est pas une égalité ne pourra pas être une définition."⁴ In the theory which Mr. Whitehead and Mr. Russell⁵ have sponsored, the sign " $=$ " is retained, but stands no longer for "equality" (or even "identity"), but, taken with "Df." ("the two are to be regarded as together forming one symbol") is a mere abbreviation for "is defined to mean." This is merely the consistent development, in a form which is important for the symbolic representation, of the nominal theory of a definition. A definition becomes thus a "mere convention," a "mere symbolic abbreviation,"⁶ a mere "typographical convenience," "theoretically unnecessary," "no part of the subject in which it occurs," "concerned wholly with the symbols," "not with what it symbolizes."⁷ And this theory is consistently applied in the monumental *Principia*: all definitions are patterned after the definition of "implication":

$$p \supset q = . \sim p \vee q \text{ Df.,}$$

where the expression on the left side of the sign " $=$ " is the "definiendum,"⁸ and the expression on the right side, the "definiens," is a combination of symbols $\sim$, $\vee$, which stand for "primitive undefined ideas."⁹

If definitions are no more than this theory asserts, then we may indeed ignore them in a study of the structural elements of a deductive system; we are not concerned there with mere "typographical conveniences."

And yet, even to call this a "theory" and to question its truth is more than the theory itself permits, which should refer to it as itself a "definition," not a proposition or theory; and therefore itself merely practically convenient, but not debatable as "true or false." Yet, we do raise the question; and we answer it: we try to show that in a definite meaning of the word "truth" it is a false theory, in

³ Cf. especially his *Les Principes des Mathématiques*.

⁴ Peano, *l.c.*, p. 279.

⁵ The theory is stated in A. N. Whitehead and B. Russell, *Principia Mathematica*, Cambridge, 1910, etc., Vol. I, pp. 11, 12, 98. It remains unchanged in the second edition of the first volume. An earlier statement of it is to be found in B. Russell, *Principles of Mathematics*, Cambridge, 1903, p. 63.

⁶ B. Russell, *Principles of Math.*, p. 63. The other quotations are from the *Principia*.

⁷ Cf. also Peano, *l.c.*, p. 288.

⁸ Strictly speaking, the authors do not define here "implication" (which is a "relation"), but " p implies q " (which is a "proposition"); but this distinction is not important here.

⁹ *L.c.*, p. 6.

that it is "inadequate." Not only this, but the authors of the *Principia*, carrying the nominalistic theory to its logical conclusion, were quite clearly somewhat troubled thereby. This theory of definition makes certain well-known facts of defining paradoxical. "It is a curious paradox," Mr. Russell wrote in the *Principles of Mathematics*, p. 63, "puzzling to the symbolic mind, that definitions, *theoretically*, are nothing but statements of symbolic abbreviations, irrelevant to the reasoning and inserted only for practical convenience, while yet, in the development of a subject, they always require a large amount of thought, and often embody some of the greatest achievements of analysis."¹⁰ And in the *Principia*: "In spite of the fact that definitions are theoretically superfluous, it is nevertheless true that they often convey more important information than is contained in the propositions in which they are used . . . it will be found, in what follows, that the definitions are what is most important, and what deserves the reader's prolonged attention."¹¹ These remarks have their source in an incomparable experience in the making and using of definitions. They express with great candor just this opposition between the theory and the practice of the authors as regards definitions. For is it really only a "paradox" with which we are concerned here? To give a thing a good "name" is often, no doubt, difficult; and always, in the progress of thinking, psychologically of great importance. But this is not at all what the authors mean here! In the experience to which they refer, the "names" (and the corresponding "concepts," and, may I add, the "entities" of which these are the concepts?) are usually already well known; where can there be any particular difficulty or importance in the "definition" understood as a mere "symbolic abbreviation"? Could it be that the "paradox" has its root in the fact that the theory of "nominal" definitions is wrong? And yet, we open the book, and the definitions have indeed the form which the theory demands!

A proposition which does not have the form of an equation, is not a definition, says Mr. Peano. Yet we find many definitions made even by the masters, which do not have the form of an equation. I mention only the famous definition which Dedekind gave of a simply infinite system¹²: "So besteht mithin das Wesen eines einfach unendlichen Systems N in der Existenz einer Abbildung ϕ von N und eines Elements 1 , die den folgenden Bedingungen $\alpha, \beta, \gamma, \delta$ genügen:

¹⁰ *Principles of Mathematics*, p. 63.

¹¹ Whitehead and Russell, *Principia Math.*, p. 12.

¹² R. Dedekind, *Was sind und was sollen die Zahlen*, p. 71.

- a) $N'3N$
- β) $N=1_0$
- γ) Das Element 1 ist nicht in N' enthalten
- δ) Die Abbildung ϕ ist ähnlich."

Of course, we could say that this is a negligence in the style of the great mathematician; that the definition could and should have been stated in the form of an equation. Suppose, however, it were done. It is still a fair question whether this transformation of the statement into an equation is essential. Not merely that it is now more elegant, or conforming to the pattern of a *good* definition, or is in a practically more convenient form, but that it is essential; so that a statement thereby becomes a definition, whilst before it was not a definition at all. For this is what the nominalistic theory demands! Of course this is non-sense. Of course Dedekind gave a definition of a simply infinite system. Of course a definition is not an equation; or an identity; or " $=$ Df."

The nominalistic theory, in its definition of a definition, which is quite consistent, has singled out a totally superficial aspect of definitions, and used it as a defining trait of a definition; an aspect which, whatever its advantage, is not essential; and which has proved wholly misleading when statements about definitions are made. This is the first thing to see clearly; then only will definitions, mere practical conveniences, and quite superfluous according to the nominalistic theory, be recognized as integral elements of a deductive system, which are difficult to make, which play a rôle comparable with that of postulates, and which are one of the sources of the "New" in a deductive system. Our results will not influence the practice of defining, as this has really very little to do with that theory (even in the writings of the adherents of the theory); but it will free us from a narrow-minded dogmatism into which this practice is apt to fall; it will directly furnish a system of criteria by which a definition can be tested which has been the principal object of such investigations as Mr. Peano's into the nature of a definition. It will then appear in its full magnitude how enormous a progress has been made in defining and how greatly this has tended to liberate the human mind.

Let me abandon, for the moment, this theory of nominal definitions which has been accepted by most modern mathematicians and mathematical logicians; let me examine instead a few much simpler and less technical examples. The traits singled out here I shall then apply to the definitions of modern mathematics and logic.

In the Platonic dialogues we find Socrates attempting forever to arrive at definitions: what is the sophist, what is the statesman,

what is the good, what is knowledge? Let us assume that the attempt was successful, and furthermore, if you like, that the definition had been put into the form of an "equation." Would it have the form $x=f(a, b, c \dots)$, where x stands for an "unknown," the $a, b, c \dots$ for "known" entities?¹³ But how can this be? The sophist, knowledge, the good could not really have been "unknown"! Those who participated in the endeavor must have known the good in good actions, and must have been able to distinguish these from bad actions. They had met and known sophists, studied mathematics as a kind of knowledge, before they attempted to define them. But, of course, you may say, the instances, the examples were known, but the good itself, knowledge itself, the sophist itself, the *ti esti*, the "concept" was to be found. And yet, how could the examples be securely known, if the "concept" was not somehow or other? How could the participants in the dialogue tell that this or that man *was* a sophist without having some grasp of the concept? On the other hand, if the examples were not securely grasped, how could the concept ever be clear and definite? No, with the classification of "known" and "unknown" elements which occur in a definition we do not get very far. But it is essential that the concept, known or unknown, is *put into relation* to other concepts, known or unknown.

And this was not the end of the story. Something was to be done with those definitions, after they had been made: Socrates proceeds to *other* statements about the entities, in addition to those stated in the definitions; e.g., that the good is knowable, can be taught, and is worthy of man's endeavor; that the sophist is bad and must be opposed. But if the definition were a *complete analysis* of the concept (as some writers seem to think), a complete enumeration of all the properties of the defined, then such further judgments would have to be contained in the statement of the definition itself. The definition does *not* contain them; it is not a complete enumeration. But it should contain determinations which *suffice* to deduce these further propositions.

The following seem thus to be essential features of a definition: (1) it states a system of *conditions*, which are satisfied by those and only those "things" which are recognized as "examples" of the defined; (2) this system of conditions *suffices* for the deduction of the *other* properties of the defined.

The same remarks apply to the definitions of geometry. If I should say: a parallelogram is a quadrilateral the opposite sides of which are parallel, then here, also, the name is not essential, nor

¹³ This is Wundt's theory in his *Logik*, which accepts the nominalistic theory of definitions. I do not mean to say that it was original with Wundt; it is held by other logicians also.

the form of an "equation," but the system of conditions by which an entity is determined. And it makes no difference to the definition whether we proceed from "parallelogram" as already "known" in intuition, determining it "analytically" by the system of conditions (as we do in elementary geometry); or whether we construct the system of conditions synthetically, and then ask whether there exists an "object" which satisfies the conditions. But there is this important difference that in the former, the "analytic," procedure we are apt to think that the "existence" of what is defined is already guaranteed by intuition; or, more correctly, that we (wrongly) deem the exhibition, in intuition, of (approximate) examples to be a sufficient proof for the existence of the defined. It is noteworthy that Euclid did not take matters so nonchalantly: in his postulates he expressly "demands" the existence of a circle, of the indefinite extension of a straight line, etc. His "postulates" (*aitemata*) are what we call "existence postulates." The necessity to be concerned about the existence of the defined is much more immediate if we *begin* with a system of conditions. This synthetic construction has an air of freedom about it which may easily give it the appearance of arbitrariness; and calls for the corrective of an existence proof, or an existence postulate. We can define what we want to define! Even the authors of the *Principia* are of the opinion that definitions are merely "the expression of a volition"¹⁴ (though, oddly enough, this is given as an argument why they "are not preceded by the assertion sign"!). Of course we can define what we want to; but whether what we have defined also *exists* is another matter. And if a definition is a sort of a baptismal service, we need not be bothered with existence proofs. But we might have asked whether *what* receives a name, the new "thing" which the definition introduces into the system, *can exist* in it. And that means, amongst other things, whether the system of conditions by which the definition defines, is *compatible* with the *other* conditions, e.g., those stated in the "postulates." Thus the system of conditions by which we defined a parallelogram is compatible with the other conditions which hold in plane Euclidean geometry. (More exactly, the *existence* of parallel lines is postulated here.) But it is not consistent with those which obtain on the surface of a sphere: here I may define a parallelogram as above; but it does not *exist*. And thus I may feel sufficiently assured of the existence of the root of an algebraical equation of the second degree by the general process of "solution," which shows how such a root can be constructed. But this holds true only if I work in the universe of *all* algebraic numbers; should my universe be limited to that of the "real" numbers, then such a root need not "exist"; and the

¹⁴ *Principia Mathematica*, p. 11.

same is true if I speak of the root of an algebraic equation in general: here I must prove the *existence* of the defined entity; and this is what the Fundamental Theorem of Algebra does. These remarks merely state what is familiar from the development of modern mathematics; I should have omitted them were it not for the fact that the situation had become somewhat confused through the influence of Mr. Peano and his brilliant school (Mr. Russell, in a wider sense, belongs to it also). As I remarked above there are no existence postulates or proofs in the *Principia*. The authors surely did not rely merely on their insufficient theory of definitions (which, quite correctly, does not belong there, being a chapter in the Structure of Systems, not of Logic which is so splendidly represented by the *Principia*); but on the fact that in each case the system of defining conditions is built up out of the "primitive ideas." And it seemed obvious that, if "proposition" and "negation" had been introduced, "negation of a proposition," as well as "negation of a negation of a proposition," etc., were guaranteed thereby already. But in the theory of groups we find it necessary, after "addition" has been introduced, still to require that " $a + b$ always belongs to the system." So does Mr. Huntington¹⁵ postulate that " $a + b$ always belongs to the system if a and b do"; and so does Mr. Sheffer¹⁶ postulate the existence of $a | b$.

The really important point is, however, that a definition states a system of conditions, by which a *new entity* is introduced into the system. Its first function is therefore to determine a *class* of things, namely, the class of things which satisfy this system of conditions. And a system is called "well-defining," and the class itself "well-defined," if of every thing (in the particular universe, of course) it can be determined whether it belongs to the class or not (R. Dedekind). (This does not assume that these "things"—"members"—are "given"; but the method must be decisive for the case of any candidate claiming to belong.) In such a case of a well-determining system of conditions we may say that it "*defines*" in the sense that it *determines*.

The "parallelogram" of Euclidean geometry has many "properties," i.e., it satisfies many conditions: it is "bounded" by four straight lines, its opposite sides are parallel, they are also equal, the opposite angles are equal, the diagonals bisect each other, etc. The procedure in geometry is to begin with a definition; the *other*

¹⁵ E. V. Huntington, "Sets of Independent Postulates for the Algebra of Logic." *Trans. Am. Math. Soc.*, Vol. 5, No. 3, p. 292, and "New Sets of Independent Postulates for the Algebra of Logic." *Ibid.*, Vol. 35, No. 1, p. 277.

¹⁶ H. M. Sheffer, "A Set of Five Independent Postulates for Boolean Algebras." *Ibid.*, Vol. 14, No. 4, p. 482.

properties are stated as *theorems* which require proofs. We may express this so: the definition is, in geometry, a system of *initial conditions* from which the other conditions (stated in theorems) are derived. But this can be done only if the definition itself belongs to a *system* (in this case plane geometry). Only then can we say that the other conditions really *follow* from the definition. And which conditions must be included in the definition depends in part on which conditions are already in the system. Our concern is here only with definitions in a *deductive* system; and here it is an important property of a definition that is a system of *initial conditions*.

The same remarks hold for the definition which Mr. Whitehead and Mr. Russell have given as the pattern of all definitions in the *Principia*:

$$p \supset q = . \sim p \vee q \text{ Df.}$$

Here, too, it is not the "name" (or the symbol), nor the " $=\text{Df.}$ " but the *right* side of the "equation" which is essential. It, too, is a system of conditions which are imposed on two propositions p and q ; and this system is satisfied for any two propositions, if the first is false or the second true. If we proceed purely *synthetically*, as the *Principia* does (the *analytical* work is preliminary, and only the results of it are incorporated here), then we have therewith established a *relation* between two propositions, which did not occur before in the system and is therefore a *new* thing in the system. If we proceed analytically, we assume "implication" somehow, and our definition gives an analysis of the concept, "reducing" it to "negation" and "disjunction." But this analysis should not be confused with a chemical analysis: it does not lead to the *ingredients* of implication, nor necessarily to "simpler" concepts. But, in whatever manner we arrive at the above definition, if it is treated as an integral part of the system of mathematical logic, *other* conditions follow from it which implication also satisfies: e.g., that it is false that the first proposition is true and the second false. A definition can therefore be conceived here, too, as a *system of initial conditions*.

If we return to the example of the parallelogram, the next point will be clear also. Its defining conditions we called initial conditions from which the other conditions could be deduced, namely, that the opposite sides are equal in pairs, similarly the opposite angles, that the diagonals bisect each other, etc. But would it have been possible to select from the *latter* a group to *define* the parallelogram and from these, as a new set of initial conditions, deduce the former initial set, as well as the remaining conditions? In other words: could we, e.g., define a parallelogram as a quadrilateral in

which the diagonals bisect each other; and from this definition derive the proposition that the opposite sides are parallel? It is clear that this can be done; and in a system of Euclidean Plane Geometry, still to be constructed, it may be better to do so. (On the surface of a sphere, a parallelogram thus defined would exist, but the opposite sides would not be parallel!)

The same applies to the definition of "implication." We could have defined it, e.g., by the condition: it is false that p is true and q is false; and deduce from it the condition: p is false or q is true, which was the defining condition above.

What I am illustrating by these examples is this: the system of *initial* conditions is not *specifically* different from the other conditions, stated in so-called "theorems"; so that by a mere inspection of conditions we could say which are *defining* conditions and which are *derived*. Conditions *become* initial conditions *by our choice*; in this choice we have a considerable degree of freedom; and it is guided by considerations which are quite distinct from these conditions themselves. It is, of course, influenced by our choice of *terms* which are "*undefined*," and by means of which all other terms are to be defined. This is obvious for the definitions which are made in the beginning of the system of geometry, or logic, etc.

But this occasions another question: *which* terms must be defined? Or: are there any terms which are "*indefinable*"?¹⁷ Nowhere is the distinction between the modern practice of defining and the classical practice and theory more obvious and important than here. According to the theory which has been regnant from Aristotle to our own days, and momentous in its influence on philosophical thinking in general, there *are* certain ideas which *by their very nature* are *indefinable*, and in terms of which all others must be defined. They are often considered as the *most universal* ideas, of which other ideas are special cases. This form of the theory has its methodological basis in the classical theory of definition by *genus proximum* and *differentia specifica*. By this method we mount to "higher and higher" concepts until, at last, we come to a stop at "the most universal" concepts; there is not any more a "higher" genus; therefore they are absolutely *indefinable*; all other ideas must (and, we hope, can) be defined in terms of them. For our present purposes it is not essential to know which are these "*most universal*" concepts, these "*categories*," these "*ultimates*," which are at the same time the "*fundamental*" concepts, but merely

¹⁷ The authors of the *Principia Mathematica* speak of "*Primitive ideas*" as well as of "*Indefinables*"; but it is not clear whether they really mean what they say. Just as Mr. Russell, in his *Principles of Mathematics*, had stated that implication is *indefinable*, though later, in the *Principia*, it is defined. The terms "*indefinable*" and "*primitive*" might therefore be taken by him in a *relative* sense: *indefinable in a given system*.

the theory that there are such, and that they must be the *initial terms* of the system. Neither is it our problem whether anything like this takes place in this or that science with this or that methodological procedure. Our problem is merely, whether this is so in a *deductive* system.

Another version of the theory that there are "*indefinables*," which has been given great prominence in recent years, maintains that a definition is always an "*analysis*." (The theory goes, in fact, further and maintains that *all* thinking is, fundamentally, an *analysis*, namely, of a given complex reality, for purposes of description and relation.) It holds further than an analysis must lead to *simpler* constituents; and that it must ultimately come to a stop when it reaches concepts which can no longer be analysed, i.e., which are not compounded or complex, the "*simples*," the "*primitive ideas*." And they are the *initial* concepts. Whether they are also, as might be, the *most universal* concepts, we do not ask here. This theory relies on a motive which, in modern mathematics and science, has had a decisive influence, namely, the principle of "*simplicity*." But it has been effective there as a "*critical*" principle, by means of which we make a *choice* between several *possible* definitions, etc. It does not say that a definition *must* be an *analysis*, nor that it *must* lead to *simpler constituents*. (As far as the general methodological background of this theory is concerned, namely, "*analysis*" as the scientific method, I remark, rather briefly and dogmatically—as lying outside my present purposes—that analysis is most valuable and indeed indispensable, but that it is *preliminary* to the building up, the "*synthetic*" procedure; which leads logically to the so-called "*postulate method*," or—platonically speaking—the "*method of the hypothesis*.")

These two theories maintain that there are "*indefinables*," i.e., ideas which *can not* be defined. Both are contrasted with the theory that, in every deductive system, there must indeed be "*undefined*" terms with which we begin; but that these are not necessarily "*indefinables*." In other words: their being *accepted* (for various reasons) as "*undefined*" does not commit us to the theory that they *can not* be defined.

Now it is clear that this question would not be decided one way or the other if an idea, claimed as indefinable, were defined by somebody else; it would decide merely about this particular idea, but leave it open whether in another case we might be more fortunate in hitting on a really indefinable idea. Nor would the question be decided if an idea were presented to me as indefinable which I did not succeed in defining: someone else might. The case is a little different when *every one* of those ideas, let us say in geometry, which

are usually claimed as indefinable, *have* been defined; and still more so when this can be done in *logic*, which is admittedly near the fundamental structure of things. One thing, however, would be decisive in the above instances: if idea d can be defined in terms of a, b, c ; and b in terms of a, c, d ; so that the same term d functions in one case as a defined term, and in the second case as one by means of which we define; then it can not be possible that a definition is an analysis into *simpler* terms; nor can it be a progression which leads necessarily from less general to *more general* terms; as the theories stated above maintain.

Let me make this more concrete by accepting the *Principia Mathematica* as a monumental and successful attempt to define all ideas of logic and of mathematics in terms of certain "primitive ideas." To these belong "negation of a proposition p ," symbolized by $\sim p$, and disjunction of two propositions p and q , symbolized by $p \vee q$. In terms of these primitive ideas we saw above that implication between propositions p and q , symbolized by $p \supset q$, is defined. Implication is then, contrary to Mr. Russell's earlier statement in the *Principles*, a *definable* relation. But are negation and disjunction *indefinable*, primitive, ultimate, simple? They certainly are "undefined" in the *Principia*. But it is also certain that they can be defined; and in a number of distinct ways. Thus if the authors had chosen Mrs. Ladd-Franklin's fundamental relation between propositions, "incompatibility" or "inconsistency" between p and q , symbolized by $p \overline{\vee} q$, they could have defined $\sim p$ by $p \overline{\vee} p$, and $p \vee q$ by $\sim p \overline{\vee} \sim q$, and $p \supset q$ by $p \overline{\vee} \sim q$. Similarly, $\sim$, $\vee$, $\supset$, as well as $\overline{\vee}$, can be defined in terms of Mr. Sheffer's stroke relation $p | q$; and so on in the various ways familiar to mathematical logicians. Now I maintain, if on the one hand we can define $\sim p$ and $p \vee q$ in terms of "inconsistency"; and on the other hand "inconsistency" in terms of "negation" and "disjunction," you can not say that the definition in any of these cases leads to "simpler," or to "more general" ideas. The *interchangeability* of defining and defined terms makes this impossible.

The mathematician and the mathematical logician have thus a degree of freedom in the choice of their "undefined" terms. And the *property* "*definable*" is *relative*: what in one system, with a certain apparatus of "undefined" terms, is "*indefinable*," becomes "*definable*" in another system with a different choice of undefined terms. And if, preliminary to the building of a deductive system, you make a list of *all* the ideas which historically occur in the system, it is not determined *which* of them shall be "undefined." We make a choice. It is not even sure that the best choice is limited to the above list: we may construct new ideas and they may serve

better than any of the "known" ideas. Thus Mr. Sheffer's "stroke relation" is historically a new idea, and serves well as an "undefined" idea in logic. Whether our choice is, logically, quite free, or whether the interchangeability between defining and defined terms is limited, is still an open question: no limit has been found thus far; and whatever ideas have functioned as "undefined" in logic, have been defined; or can easily be defined. This does not mean, of course, that all such choices are equally "good"! But that raises a different type of question which belongs to the Critique of Cognition; and even the question would be vain, if there were not different choices.

The development of mathematical logic has not only promoted the technique of defining; it has also enabled us to separate here more clearly the purely logical question from the psychological. To express "unknown" ideas in terms of "known" ideas involves a psychological question; logic can not decide what is "known" and what is "unknown." Logic may aid psychology by establishing all the possible relations of the terms of a system, i.e., make *all* the logically possible definitions; so that psychology may pick the one which is made in terms of concepts known to an individual, or group of individuals. (A psychologist advising a teacher of arithmetic would certainly *not* recommend the definition of the cardinal number one given in the *Principia*!) The one thing important for the logician, the one requirement he makes of all definitions, is: that the defining conditions do uniquely *determine* the "definiendum" (to use the language of the *Principia*). If definitions are given in the form of "equations," this means that the right and the left side of the equation are really *equivalent*; of course in the given system; not necessarily otherwise.

In the construction of a deductive system the "undefined" terms appear as "symbols" (words, or signs) which, however we may have come to them, *have no* "meaning" in the system. That does not imply that they are merely arbitrary; for they have *relations* to each other which are determined in the "postulates" of the system, and in the definitions. So we can *give* them a meaning, of which we require that the resulting interpretation of the postulates and definitions also has a meaning and makes them true propositions. Otherwise this interpretation may differ widely from the meaning which the system-builder originally had in mind and used as an empirical guide in his work. This is the sense in which some writers (e.g., Mr. E. V. Huntington) speak of the undefined terms as "*variables*," which only by a suitable interpretation receive a definite value. It is necessary, in this case, to distinguish an "*interpretation-variable*" from the ordinary "*system-variable*." The

latter, which Mr. Russell has used, takes values which are members of a definite system. The former takes values that determine *different* systems. Before an interpretation is given to the symbols which represent the undefined terms, the postulates are not "propositions," in Mr. Russell's limited meaning of the word: they are neither true nor false. That is, I suppose, what Mr. Huntington means by an "*abstract*" theory: it abstracts from a definite interpretation. It becomes, thus, a "*concrete*" theory only *after* an interpretation has been made. This way of conceiving the undefined terms as interpretation-variables is of great importance. It permits the construction of suitable examples for the "*independence proofs*" of the postulate sets.¹⁸ Secondly it makes possible the development of a *general* theory which embraces several deductive systems.¹⁹ Thirdly it may be used to prove that the system of undefined forms is "*irreducible*."²⁰

If the above theory of the nature and function of definitions in a deductive system is accepted, various otherwise puzzling consequences follow immediately.

Firstly, it is obvious that if a definition is a system of initial conditions, defining is not likely to be a simple affair. It presupposes a careful study of the relations between the various terms of the system. And the difficulty of a definition will be still more apparent if the thing to be defined does not yet exist in the science in question. Whoever first defined a "*chain*," a "*conformal representation*," a "*dense (as distinguished from a continuous) series*" made a discovery which, without intimate knowledge of the particular field, would have been impossible. The many remarkable definitions which Mr. Russell and Mr. Whitehead have given are great achievements; and nobody doubts the effort which they cost.

Secondly, we shall recognize the *importance* of definitions in a deductive system; and the authors of the *Principia* quite rightly invite our careful study of their definitions. Definitions are really starting points for proofs, as Aristotle taught. And they can function in this way, because they state a system of conditions *comparable to the sets of postulates*. That they do function thus even a cursory examination of any deductive system will show. The mill would soon run dry, if the definitions did not, again and again,

¹⁸ Cf. the numerous monographs by E. V. Huntington and others in the *Transactions of the American Mathematical Society*.

¹⁹ Cf. E. V. Huntington: "The Fundamental Propositions of Algebra" in the collection: *Monographs on Topics of Modern Mathematics*, ed. by J. W. A. Young. Longmans, Green and Co. 1911.

²⁰ Cf. Padoa: "Essai d'une théorie algébrique des nombres entiers," in *Bibliothèque du Congrès International de Philosophie* (Paris, A. Colin, 1901), Vol. III.

furnish new grist. And in this close resemblance between definitions and postulates which our theory exhibits, lies the reason how it is possible for Mr. Dedekind²¹ to develop his theory of natural numbers without a single postulate: his foundations are established in the various *definitions*.

Thirdly, if a definition is a system of conditions, then the *criteria of a good definition* will be the same which have been developed for systems of postulates: consistency, sufficiency, simplicity are the main ones. The first two we anticipated above when we said that a definition should determine a class, and should suffice as a basis for deriving all the other properties of the defined entity.

Fourthly, we can now decide the question whether definitions which are not in the form of "equations" are admissible. Mr. Peano denies this. Mr. Couturat agrees with him. But Mr. Burali-Forti²² writes: "Définer un objet quelconque signifie: donner une ou plusieurs relations logiques contenant. . . ." I agree with Mr. Burali-Forti. The arguments which Mr. Couturat made against Burali-Forti's distinction of three kinds of definitions: "J'appelle nominale, par postulats, par abstraction les trois formes de définitions,"²³ are not conclusive.²⁴ They are directed against insufficient or bad definitions by postulates, not against this *form*.

Lastly our theory of definitions throws important light on the problem of the "New" in a deductive system which troubled Mr. Henri Poincaré, and of which he gave a wholly inadequate solution. Definitions are one of the sources of the new. I spoke of this above. It is clear of such entities as triangle, parallelogram, circle, etc., that we are dealing with things which were no part of the system until they were introduced by their definitions. It is at first perplexing that this is not so clear with the definitions of the *Principia Mathematica*. For here, indeed, all the entities of the system seem to be "reduced" to the "primitive ideas." If we take again the definition of implication

$$p \supset q = . \sim p \vee q \text{ Df}$$

we have, on the right side, nothing but primitive ideas. How can anything *new* be thus presented? But, if we ask: was there already an implication relation between propositions? we may, looking at the definition, hesitate; we see only old friends on the right; but in the end we shall admit: no, there was none. Well, then the definition introduced it. But how can it introduce something new

²¹ Dedekind, *Was sind und was sollen die Zahlen*.

²² Cf. Burali-Forti: "Sur les Différentes Définitions du Nombre Réel." *Biblioth. du Congrès Intern. d. Philos.*, Vol. III. Paris, A. Colin, 1901.

²³ *L.c.*, p. 290.

²⁴ Couturat, *Les Principes des Mathématiques*.

using nothing but what is old? It would suffice if it was admitted *that* it introduced something new, even if we could not see *how*? And it were a marvel indeed if all the entities of logic, of mathematics, and of mechanics could be "reduced" to a handful of primitive ideas! Having reached the position of accepting the new, it is really a simple matter to see how the definitions of the *Principia* achieve it. It is only necessary to point out that the symbols $\sim$, $\vee$ occur here in a certain *configuration*; which is thus revealed as a *necessary element of the symbolism of the Principia*. Only in the given connection and order does the second member represent the implication relation; a change in the order may, though it need not, make a formula invalid. Implication is therefore not at all "reduced" to negation and disjunction. It is merely put in *relation* to them.

Why have the moderns derogated the importance of definitions and treated them as mere symbolic conveniences? The reason seems to be: they emphasize the *freedom* of defining. Definitions are, according to them, a matter for our *will*; you can define what you want and how you want; nobody can criticize you in this exercise of your will; i.e., definitions are not "*propositions*" and therefore *need not be "true."* But it would occur to no one to consider the serious definitions of the *Principia* as the results of such a bizarre "*will.*" How much there is of "*will,*" how much of "*thinking*" in any concrete act of thought, who would say in general. But we are not psychologizing now. We spoke above of a "*choice*"; and where there is a choice, there is, I suppose, a choosing will. We have freedom of choice here; but a *freedom subject to law*.

That the new achievement in the technique of defining means a revolution in our philosophic thought, that it puts the ancient problem of "*categories*" in a totally new light, with new freedom and new responsibilities, who can doubt?

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IS IDEALISM INCURABLY AMBIGUOUS?

PERHAPS the most useful of the functions which a technical journal is called upon to perform is that of enabling the experts in a subject to discuss their differences, and especially the meaning and appropriateness of their technical terms. This remark applies particularly to philosophy, which has long been suffering from the manifold ambiguities and scandalous vagueness of its leading conceptions. Accordingly, the enterprise of Professors Pratt, Barrett, and Brightman in trying to pin down the elusive term

"idealism" to something like a definite meaning is worthy of all praise,¹ and as their dispute is not a private one but concerns us all, I hope that some further comment on their efforts, from a somewhat different standpoint, will not be unwelcome.

My own sympathies have long been with Professor Pratt. Already when I wrote the last chapter in *Studies in Humanism* it seemed to me that the development of the problems and the personal vagaries of the philosophers who used the terms "idealism" and "realism" had rendered both of them unfit for the description of any live issue in philosophy; and the confusions, so deftly dealt with by Professor Pratt, which have resulted from their continued use seem to have fully justified my attitude. In view of the present chaos Professor Pratt's demand for a clear distinction between what is called "idealism" and what is called "realism" is a demand for clearness and honesty of thought. On the other hand the papers of Professors Barrett and Brightman also seem to me to provide valuable materials for an answer to Professor Pratt's question. I assume that he will answer them effectively, and that we shall all be instructed.

But I fear that, unless I intervene, it is unlikely that any of the present parties to the discussion will treat it, in future as in the past, from the broadest and most fundamental point of view of which it is susceptible, the point of view from which alone the whole dispute can be reduced to order, and room can be found for all its possibilities. I would call this the *Humanist* or Protagorean point of view, and trace it back to the dictum that *Man is the Measure of all Things*. This is surely not only the earliest, but also the most thoroughgoing, affirmation of the philosophic importance of man, which bears in its bosom all the later idealisms as partial, one-sided, and more or less misconstrued developments. It leads up naturally to the simple, sweeping, and one might hope non-contentious definition that any view which realizes that some reference to man is always implied in any world with which man is concerned, and can never be expunged from it, is fit to be called idealism.

If then we disabuse our minds of traditional but groundless prejudices which construe relevance to man as absolute relativity, and relativity as subjectivity, and subjectivity as solipsism and/or scepticism, it is not difficult to see that the dictum of Protagoras is in no wise a denial of any "reality" which can be of human interest or importance, and that, as a methodological principle at least, it carries the completest assurance of a possible harmony between man and the world he inhabits. It rules out from human measurement none but realities which are alleged to be unknowable, unmeaning,

¹ This JOURNAL, Vol. XXX, pp. 169-178, pp. 421-429, pp. 429-435.

inoperative, fictitious, or absurd. If humanism therefore be idealism, it is an idealism to satisfy all human demands and to which humanly no exception can be taken. It is the *first*, both logically and chronologically, the most comprehensive and complete, and all the other "idealisms" can easily be developed out of it by various restrictions.

Thus (2) solipsism (for which, paradoxically enough, Professor Brightman finds no room among his four historic forms of idealism) is easily fabricated out of it. For if abstraction is made from the fact that man's activities are not only "theoretic," but also "practical," solipsism at once becomes a very obvious and obstinate consequence of the relativity of all experiences to an experiencer.

(3) Berkeleian "idealism" also is easy to arrive at, if attention is focussed exclusively on the dependence of perceptions on a percipient.

(4) Out of this, as history showed, Humian "atomism" (a second form of idealism for which Professor Brightman's classification has no place) springs up, if an attempt is made (however unsuccessfully) to resolve the percipient into perceptions.

(5) A place can be found also for the enigmatic doctrines of Plato, which abstractly might just as well be labelled "realism" as "idealism," though for linguistic reasons they can not be expelled from the pedigree of idealism. What precisely Plato meant by his Forms or Ideas at various epochs of his thought will always probably remain a subject for dispute: but something like agreement may perhaps be reached at least on this, that they arose in the context of what we should call a *logical* problem, and in order to justify the practice of predication. If so, it may be said that Platonic "idealism" arises from taking man as a logical creature, just as Berkeleian arises from taking him as percipient.

(6) Professor Brightman's description of "Hegelian" idealism, "reality is organic—wholes have properties which their parts do not have" (p. 432), is easily deducible from "man is the measure." For all its constituents "reality," "organism," "whole," "part," are plainly human constructions based on human experience, and their adequacy and "truth" are still being worked out and tested.

(7) Professor Barrett's somewhat divergent version of "Hegelian" idealism leads to the same conclusion. According to Professor Barrett (p. 423) "Hegel pointed out that all perceptive activity requiring a subject-object relationship, implies a more inclusive synthesis. Subject and object alike depend upon his higher synthesis for their being, and finally upon the unconditioned synthetic unity of the world order, of which they exist as organic parts. This world order, being absolute, can not participate as an infinite Mind

in the relational activities of consciousness; that is, it can not itself be conscious, or a perceiving agent." This omits the important claim of the Dialectic to predict the course of history, but plainly postulates a large number of human notions, the superhuman validity of which remains problematic, viz., (a) subject-object, (b) higher synthesis, (c) world order, (d) unity of the universe, (e) the unconditioned, (f) the absolute, (g) the infinite, (h) mind, and (i) relation. Whether (and if so, how far) these notions are applicable to human life and helpful in understanding it is, or should be, a matter for philosophic inquiry. But their status and value can hardly be taken as independent of human purposes and as *a priori* certain.

(8) From Professor Barrett's summary of the other orthodox or "objective" idealists it would appear that they all agree in substituting a *relational* for a perceptual dependence of the world on "mind." But is this a vital difference? Does it dehumanize the world completely? Does not this interpretation still leave "idealism" dependent on the nature of the *human* mind and its conception of "relation"? And does it not still leave the transition from the human mind to the absolute a *salto mortale* which no idealism has accomplished by legitimate means, and which it can not accomplish without discrediting itself as an instrument for cognizing reality? Surely the sceptical ending of F. H. Bradley's "idealism" has sufficiently revealed this unavoidable dilemma.

(9) Professor Brightman makes a recognition of Value pivotal for one of his sorts of "idealism," and credits it to Plato² (p. 432). But it is not at first sight obvious why an assertion that "value is objective—its meaning and origin lie beyond the human knower" should be labelled "idealism" at all, especially when one remembers that the analogous assertion that reality is objective and independent of man is usually regarded as the basis of "realism." It is no doubt highly important for philosophy to recognize how all-pervasive values are and that conceptions like those of "higher," "lower," "adequate," nay of "reality" itself, involve value-judgments; but this would appear to be quite a modern discovery. Moreover whatever "objectivity" values may acquire socially, they certainly *start* as personal valuations, so that their "objectivity" rests in ultimate analysis on the practical agreements and conveniences of persons—very much like the "independent reality" of realism. Value then is plainly Protagorean rather than Platonic.

(10) Professor Brightman's "Lotzean" "reality is personal—

² This attribution is presumably based on the mention of the Idea of the Good in the *Republic*. But the Good there plainly stands merely for the principle of teleological interpretation, which is admittedly *ex analogia hominis*. Moreover it had cosmic significance in Plato's eyes, not *qua* good (value), but *qua* "Idea" (true reality).

only persons or selves are real" (p. 432) comes nearest, of all his "idealisms," to a recognition that *unmutilated* man is the true measure. For man assuredly (and also any "mind" we know) is personal, and personal idiosyncrasies underlie all philosophies. But that "*only* persons are real" remains a hypothesis, to which it does not seem necessary for man to commit himself *a priori*.

There remain two sorts of "idealism," to which neither Professor Barrett nor Professor Brightman has made reference, namely, (11) the use of "idealism" in a moral sense. This derives, not from "Idea" nor from "idea," but from "ideal." This sense of "idealism" is highly popular, and it seems doubtful whether it can ever be eradicated. For if it were discarded, it would become ever so much more difficult for "idealists" to get themselves appointed to professorships, simply as such. So the human motive underlying this sort of idealism is sufficiently obvious.

Lastly (12) it has not been mentioned either by Professor Barrett or by Professor Brightman that there is a profound difference between *a priori* and empirical idealisms. Yet any idealism may (a) jump from the fact that a conception can be formulated to the conclusion that it is *valid*, in the sense of applicable to life or reality; or (b) it may recognize that its conception still stands in need of verification in experience and by its working. Historically the more notorious and typical idealisms (especially Nos. (5), (6), (7), and (8)) have all been conceived to belong to the first class; that is, they have been based on the "ontological" argument and have argued *a priori*, even though they might perhaps have stated their case empirically and submitted to confirmation from experience. Yet it hardly follows from the fact that a conception is desired (and perhaps desirable) that it is also applicable and true of the real. Moreover, empirical idealisms have a distinctive argument of their own: they can argue from the existence of dream-worlds as psychic facts. Finally, it should be observed that no empirical idealism, since it admits the need of verification, can acquire more than some degree of probability. Hence the requirement of empirical verification incidentally strips idealism of its chief charms; it rules out of order the claim of idealist systems to "necessary" truth. Even if they could make good their claims to be necessities of thought—and their numbers would seem to discredit such claims—it would remain open to question whether necessities of thought could control the real, and so whether the systems were actually true.

What is left, then, of the *apologia* for idealism? According to Professor Barrett (p. 427), "Objective idealism relies upon the final cosmic significance of value, coherence, and systematic completeness." But all of these are human ideals, which have to be ac-

commodated to the other human ideals, and can not be allowed to negate them without further discussion. According to Professor Brightman (p. 432), idealism is more than mentalism, because it includes "the problems of value and of mind" (p. 433). So for him there are four sorts of idealism, and "any system is idealistic which affirms one or more of these four propositions, provided Hegel's be included" as the "minimum idealism" (p. 432).

Actually, however, we have seen that there are a round dozen of "idealisms" which can be, or are, maintained. And Professor Brightman's "definition" only covers four of them. Is it well, is it fair, is it safe, to withhold official recognition from the rest? It would no doubt be a counsel of perfection to devise distinctive names for all of them, and to enforce consistent recognition of these distinctions: but in default of this ideal will it not have to be confessed that "idealism" is an incurably ambiguous term? And, if so, ought it not to be dropped as mischievous and unscientific from our philosophic vocabulary?

Lastly, I may be asked, But what about realism? Is it any better? If so many sorts of idealism are recognized, what place is left for realism? Will it not be merged in some of your idealisms? And then our hoary academic dichotomy between realism and idealism may have to be scrapped altogether and cast upon the dungheap!

I should be sorry to give needless offence to any form of realism, which seems to me by far the less tricky and pernicious sort of dogmatic metaphysics. But as a complete or Protagorean idealist, who is glad to think that man may be an *adequate* measure of *his* experience, who holds that he has no right to torment himself with unmeaning problems about what can not be related to human experience, and who is glad to find that actually a reference to man lurks in all the "objective" realities commonly recognized, I should be far from inconsolable if it turned out that adequate accommodation *could* be found for most "realisms" in my "humanism." I would venture also on the suggestion that all the realisms that seemed plausible and reasonable could find a place in one (or several) of the pigeon-holes provided for idealisms. As for the rest, for which no place could be found, might they not be dismissed as perverse, superfluous, and unprovable? But this is not of course to imply that there would be no philosophers who insisted on "believing" in them, nor to deny that animal "faith" may frequently get the better of human "reason."

UNIVERSITY OF SOUTHERN CALIFORNIA.

F. C. S. SCHILLER.

BOOK REVIEWS

Mysticism East and West: A Comparative Analysis of the Nature of Mysticism. RUDOLPH OTTO. New York: Macmillan Company. 1932. 262 pp.

The title of this very valuable book is somewhat misleading; for it is not typically eastern and typically western mystical experience which it compares, but two varieties of a special type of mystical theory. The book, in fact, is a comparative and analytical study of the "mystical" philosophies of Śāṅkara and Eckhart. It is marked by an unusual balance between sympathetic insight and critical judgment; and is based upon profound Christian and Indian scholarship and sensitivity for the niceties of the psychology of religion.

There are two extreme opinions to both of which our author is firmly opposed. One asserts that in mysticism as in other things "East is East and West is West, and never the twain shall meet"; the other insists that mysticism is always essentially the same in all the mystics of all the lands and all the centuries. Against both of these schools Otto maintains that "in Mysticism there are indeed strong primal impulses working in the human soul which as such are completely unaffected by differences of climate, of geographical position, or of race. These show in their simplicity an inner relationship of types of human experience and spiritual life which is truly astonishing. . . . It is false to maintain that Mysticism is always just Mysticism, is always and everywhere one and the same quantity. Rather, there are within Mysticism many varieties of expression which are just as great as the variations in any other sphere of spiritual life, be it in religion generally, or in ethics, or in art. These variations as such are not determined by race or geographical situation, but they may appear side by side, indeed they may arise in sharp contrast to one another, within the same circle of race and culture."

The larger part of the volume is devoted to a detailed study of the great similarities, in both thought and expression, between Śāṅkara and Eckhart; a briefer section points out the equally fundamental differences between the two thinkers, and explains them by means of the contrast between the Indian and the Christian traditions. In the large literature of the subject it is doubtful whether one could find another equally excellent exposition of the two men here studied. The examination of each in the light of the other brings to the fore certain nuances of thought and attitude in each which to the present reviewer at any rate had never before been suggested and which constitute a fascinating lure for further

thought. The limits of this review forbid a detailed consideration of the various topics discussed; but one question of a fundamental sort should perhaps be raised. This question, though in one sense fundamental, is from another point of view perhaps superficial and purely verbal—the question being this: What, after all, is mysticism? And more specifically, is mysticism a type of theory or a type of experience? It is not altogether certain what Otto's answer to this question would be. The detailed study of Śāṅkara's and Eckhart's philosophies might seem to indicate that the author regards mysticism as a form of philosophical or theological theory; and specific statements point in the same direction. The sense of union with the Divine, we are told, is not essential to mysticism, provided the Divine or the ultimate Unity be conceived in non-rational fashion. "It is characteristic of certain types of Mysticism to seek the *Deus sine modis*, and to cherish Him in the soul. 'God' is then experienced in an act of union. But a man is a mystic as soon as he has this conception of God, even when the element of union recedes or remains unemphasized, which can easily happen in Mysticism. It is the wholly non-rational character of this conception of God with its divergence from the innate, personal, modified God of simple theism, which makes the mystic. . . . Etymologically 'mystic' has nothing at all to do with a 'union.' '*Mystica*' was originally an adjective qualifying the substantive 'theologia.' The essence of the *mystica theologia* lay in the fact that it claimed to teach a deeper 'mystery' and to impart secrets and reveal depths which were otherwise unknown." On the other hand, Otto tells us, these secrets and depths were conceived as revealed by a mystical *sense*; and he writes, "Mysticism enters into the religious experience in the measure that religious feeling surpasses its rational content, that is to the extent to which its hidden, non-rational, numinous elements predominate and determine the emotional life." If one should venture to criticize Otto's general treatment of mysticism in this book it would be well to begin with the uncertainty, never fully dissolved, as to just what mysticism means to him. The non-mystical reader at times feels that he is a little too indulgent with Śāṅkara's and Eckhart's disregard of the principles of Contradiction and Excluded Middle, and that, being a mystic himself, he has caught from them something of their habit of slurring over distinctions and of uniting incompatibles. Though criticism of this sort be to some extent justified, however, it should be a consideration of secondary importance in the appraisal of a book which is certainly one of the finest expositions of mystical theology ever written.

WILLIAMS COLLEGE.

JAMES BISSETT PRATT.

Invitation to Philosophy. DURANT DRAKE. Boston: Houghton Mifflin Co. 1933. xxvi + 537 pp.

Introductions to philosophy are quite various in make-up. They reflect, in the main, two things: the author's philosophical position and his pedagogical methods. It is these factors, I take it, that determine the structure of the book he offers to his colleagues and the reading public. There is, in addition, the almost equally important element of workmanship and literary quality.

As all teachers of philosophy know, Professor Drake served his apprenticeship as a writer of introductions years ago. Hence we have certain rightful expectations when we open a new book from his pen. For instance, we anticipate that the book will be well written and will possess both clarity and charm. Judged on these points, *Invitation to Philosophy* is a typical Drakian production. It is, as we should expect, somewhat more solid than some of the earlier works. Quite evidently, it is a product of years of teaching and of philosophical reflection.

In what follows I shall try to give brief indications of the topics covered and the point of view adopted. On a few crucial questions I shall make comments reflecting my own perspective.

The book is divided into five main parts entitled, respectively, The Quest of Truth, Knowledge and its Object, The Cosmos, Life and Mind, Values. Each part has its relevant chapters. Thus, under the first, we have such sub-headings as The Voice of Authority, Intuition and Faith, A Priori Truth, Empirical Knowledge, and Pragmatism. Taken together, these chapters furnish a sort of criteriology and make an excellent preparation for the later parts. I judge that it was written to make the path smooth for the very frank naturalism which was to follow. In the final chapter of this section pragmatism is quite roughly handled, though it is the more sentimental pragmatism of James rather than the experimentalism of Dewey that Drake has in mind.

It is soon noticeable that the common historical approach is completely discarded. The student is not invited to understand Cartesian dualism and the controversy about the status of ideas. This whole background in relation to which theory of knowledge is usually discussed is simply omitted. There are, of course, losses in such an omission as well as gains. I am, myself, still a conservative on this point.

The reviewer was very naturally interested in the second part, which deals with epistemology. The argument begins with the inadequacy of naïve realism and passes to subjectivism and idealism. After these possible positions are studied there is the return to realism of a supposedly more adequate sort. I shall allow myself

certain comments on Professor Drake's constructive position. *Sensa* are merely supposititious existents. I must confess that I find a certain ambiguity in the use of this term "*sensum*." It is my feeling that it covers, in a blanket fashion, sensory content, a denotative reference, and a description. It is quite true that we can make references with descriptive interpretations when there is no corresponding existent. Is this all that is meant? If so, I think that the term "*sensum*" is badly chosen since it has other associations for most people. Another point. Professor Drake is so much impressed by the motor factor in perception that he seems to me to fail to distinguish between the motor *conditions* of a perceptual experience and the actual experience. It is my impression that his panpsychism tempts him to regard this perceptual experience as an illusion. He is quite aware that there are complicated operations in the organism but his rejection of emergence forbids him to regard the perceptual experience as emerging with these operations.

There is a detailed discussion of relativity in the third section. He is decidedly of the opinion that the theory of relativity can not be given ontological significance. With much of his treatment I have sympathy; yet I suspect that he does not sufficiently realize the physicist's standpoint, which is operational and positivistic. I wish that Professor Drake had defined what he means by space and time.

There are excellent summaries of the results of science all through the middle sections of the book. The reader is warned against naïve notions of evolution and against romantic ideas of a life-force. It is straight mechanism and determinism which is taught. I found myself quite in sympathy with his defense of actual causality, but much more hesitant with respect to his mechanistic views.

And this brings me, again, to Professor Drake's treatment of emergence. Certainly, my notion of emergence is not the one he criticizes. I should like to ask him what *organization* and *wholes* mean to him. Is a system more than an aggregate? Thus, he is ready to stress a certain unity in an organism's motor-response, but it does not seem to be an organized unity but a kind of constellation. To put it in psychological terms, I am more of a Gestaltist than he is. I can not help feeling that his handling of the term "*sensum*" helps him to avoid the psycho-physiological problem here.

The treatment of values is delightfully clear and concrete. Especially good is the chapter of beauty. The discussion of morality will give a satisfactory orientation to the student. Perhaps there is too much omission of technical points but, once again, this can be defended on the score that the essential thing is an orientation.

The final chapters deal with religion, the God-idea, and human destiny. There are some excellent quotations to illustrate contemporary views of religion. Drake, himself, evidently favors something like humanism though he is somewhat equivocal on the matter. I judge he is reluctant to relinquish a term which has the "emotional overtones" possessed by the word "God."

ROY WOOD SELLARS.

UNIVERSITY OF MICHIGAN.

Spinoza-Festschrift. Edited by SIEGFRIED HESSING. Heidelberg: Verlag Carl Winter. 1932. Pp. xvi + 222.

Spinoza, The Man and His Thought. Edited by EDWARD L. SCHAUB. Chicago: The Open Court Publishing Company. 1933. Pp. 61.

Spinoza. S. ALEXANDER. Manchester: Manchester University Press. 1933. Pp. 20.

Spinoza: Sa Vie et sa Philosophie. HENRI SÉROUYA. Paris: Éditions Excelsior. 1933. Pp. 83.

The recent celebrations of the tercentenary of Spinoza's birth and the scores of essays written in his honor are witnesses to the appeal Spinoza makes to his readers. The essays in the volume edited by Mr. Hessing may be divided into eulogies, those dealing with special problems in Spinoza, and those that treat of his relation to Judaism. The tributes to Spinoza are beautifully written and very touching. With the exception of the essays by Dr. Brucar, Professors Gherasim and Siegel, the special topics are eulogistic in character and add little to our understanding of Spinoza. Of the papers dealing with the Jewish phases of Spinoza, we shall consider only those of Professors Klatzkin and Klausner.

Professor Myślicki, in the volume above mentioned, places the power of Spinoza's attraction in his ability to integrate the various extremes of human nature that so often appear chaotic and inharmonious. Nevertheless, Professor Myślicki seems to realize the lack of evidence in favor of this position when he admits at the end of his essay that if Spinoza was not an ideal nature he, at least, strove to be one. Others, guided by the intent of Spinoza rather than by his actual accomplishments, regard him as the most systematic of philosophers. Those who find in Spinoza a complete system do so by virtue of minimizing inconsistencies and ignoring difficulties. Their vision of a system in Spinoza is a result of their admiration of him rather than a cause of it. How then can this interest in Spinoza be explained? Spinoza's appeal must be understood in terms of the dramatic contrast between the man and the problems he proposed to solve. It is the contrast between the lens-grinder and the contemplator that captures our imagination. We stand in awe before

the spectacle of a man in the gutter pointing in the direction of the most total and continuous happiness, saluting and embracing God.

Dr. Brucar asserts that the doctrine of the eternity of the mind follows logically from Ethics I and II and that Spinoza introduces this doctrine in order to make the intellectual love of God possible. However, an examination of Ethics V will show that Prop. XXIII can not be inferred from Book I and II and that the intellectual love of God is the ground for the eternity of the mind rather than the consequence of it. For Professor Gherasim the most significant feature of Spinoza's doctrine of the emotions is his emphasis on the extra-rational as well as the rational parts of our psychical life. The possibility of a clear insight into the irrational elements of our soul is afforded us by Spinoza's treatment of will, love, and desire as modes of the attribute of thought. Professor Siegel sets up a system of emanations beginning with "God as such"—to *natura naturans* as God with respect to nature—to *natura naturata* as "nature generally" with respect to God—to the sum total of "particular things as such." To each of these levels there is a corresponding type of knowledge. Intuitive science belongs to *natura naturans*, rational knowledge to *natura naturata*, and inadequate knowledge to particular things. "God as such" can not be known by man. All that can be said is that He knows Himself. It is to be hoped that Professor Siegel will expand his little essay and make clear the meaning of "God as such" and "nature überhaupt." Dr. Klatzkin claims that the awkwardness in the use of Latin causes Spinoza to be misunderstood and that when translated into Hebrew many difficulties are resolved. True enough, the Hebrew equivalent of "*idea-ideatum*" is a more faithful reproduction of Spinoza's thought than the English version, "idea-object," but the full meaning of the "*idea-ideatum*" relation can only be recovered in the Greek νοεῖν—νοητὸν. The Greek term ἀρετή expresses Spinoza's notion of "*virtus*" whereas it is impossible to find a corresponding Hebrew equivalent. To translate Spinoza intelligently we must resort to the Greek of Plato and Aristotle. Professor Klausner infers the Jewish character of Spinoza's philosophy from the fact that both Judaism and Spinozism contain contradictions and inconclusive arguments. From external resemblances such as these, Mr. Klausner is hardly justified in making this inference, since the same line of reasoning could also serve to make the work of any mortal, Jewish in character. Again, in order to minimize Spinoza's antagonism against Judaism and to mitigate his contempt for the Cabbalists, Professor Klausner points out that Spinoza also spoke disparagingly of Plato and Aristotle. In a letter to Hugo Boxel, Spinoza does say that the authority of these Greek philosophers does not carry much

weight with him. From what follows it appears that Spinoza had in mind the Plato and Aristotle of "occult qualities, intentional species and substantial forms." The distinction between the Plato and Aristotle as they appear in their original works, and the Plato and Aristotle of the medieval theologians is one of great importance. Spinoza knew the latter and rediscovered the original. But Mr. Klausner's essay is a mine of information and well worth reading.

The volume edited by Professor Schaub consists of opening addresses by Professor Charles W. Morris and Dr. Harry W. Chase and papers by Mr. Schaub, Professor T. V. Smith, and Rabbi Solomon B. Freehof. Professor Schaub's essay combines admiration for Spinoza with dispassionate analysis. Though Spinoza tried to bring the findings of ethics, physics, psychology, and theology into one complete synthesis, the difficulties involved in his notion of substance, in the relation of the finite to the infinite, in determinism and in freedom, compel us to admit that he was not completely successful in his project. Professor Smith's paper is written in the Lockian spirit and may be regarded "as a protest against sitting still and perishing." It may abound to the credit of Spinoza that he learned to make the best of life at its worst and to live uncomplainingly with himself. Nevertheless, as an amateur in politics and as a formalist in ethics, he can not serve as a guide in our efforts to improve society. Thus, says Professor Smith, we celebrate Spinoza's birthday aright when, leaving the logicians in despair, we recommend him to the poets and to the theologians.

Professor Alexander suggests that while eighteenth-century rationalism and nineteenth-century science made it impossible to accept religion and God as part of one world, Spinoza, by "pursuing the method of neutrality, that is naturalism, establishes the ideals of good life, and maintains religion without excuses, and at the same time without affirming that either morals or religion, as so many suppose to-day, supplies us with directer knowledge of reality than physical science."

Mr. Sérouya's little book is an attempt at a popular exposition of Spinoza. It deals with the life and appeal of Spinoza more than with the systematic analysis of any one problem. The book is well written and the thirty-two illustrations in it are very beautiful.

One wishes that many of these essays were less enthusiastic and more profound, but perhaps one should not be too critical of papers written for the express purpose of celebrating a birthday and designed to improve persons rather than to clarify ideas.

ALEXANDER LITMAN.

YESHIVA COLLEGE.

JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. Vol. XLII, 6. Clauberg and the Development of Occasionalism: *A. G. A. Balz*. Locke's Theory of Ideas: *W. C. Swabey*. A Controversy in the Logic of Mathematics: *Alice Ambrose*. Discussion:—The Parmenides in the Light of the Propositional Function: *Eleanor Bisbee*. Morris's Six Theories of Mind: *A. O. Lovejoy*.

THE NEW HUMANIST. Vol. VI, No. 6. Civilization through the Contagion of Action: *A. E. Morgan*. In Defense of The Manifesto: *R. W. Sellars*. Paul Tillich and American Humanism: *Harold Buschman*. Why Insist on God?: *E. C. Vanderlaan*. A. N. Whitehead and the Rôle of Ideas: *E. A. Burt*. Another View of Eddington: *V. C. Aldrich*.

Mace, C. A.: *The Principles of Logic. An Introductory Survey*. New York: Longmans, Green & Co. 1933. xiii + 388 pp. \$4.50.

NOTES AND NEWS

The project of the American Philosophical Association, sponsored by the American Council of Learned Societies, for bringing up to date the bibliography of philosophy begun by Benjamin Rand in Baldwin's *Dictionary of Philosophy and Psychology* is under way. When completed the work will include a comprehensive list of books and articles on philosophy since 1902, classified both according to subject-matter and according to author. As an initial contribution to this undertaking we call attention to the publication by Longmans, Green & Company of William A. Hammond's *Bibliography of Aesthetics and of the Philosophy of the Fine Arts from 1900-1932*. This was published as a supplement to the May, 1933, issue of the *Philosophical Review*, but may be obtained as an independent book, price \$3.00. It contains 2,191 titles, arranged according to subject-matter under seventeen heads, and will be found valuable not only for esthetics but for the general history and criticism of art.

We call attention also to *A Bibliography of Experimental Aesthetics 1865-1932* by Albert R. Chandler, which is "the result of an attempt to list the original reports of the psychological experiments in the field of aesthetics, together with the more important books and articles which give critical summaries or interpretations of such experiments." This is the first number of the Bureau of Educational Research Mimeographs of the Ohio State University Studies.

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Volume XXX. No. 18. August 31, 1933.

What is Poetic Truth? LOUIS HARAP.

Data, Datives, and Ablatives. F. C. S. SCHILLER.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 19. September 14, 1933.

Recent Developments in Indian Thought. JAMES BISSETT PRATT.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 20. September 28, 1933.

A Frequency Theory of Probability. ERNEST NAGEL.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 21. October 12, 1933.

Naturalism and Agnosticism in Santayana.

STERLING P. LAMPRECHT.

Report of the Chicago Meeting of the American Philosophical Association. HAROLD A. LARRABEE.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 22. October 26, 1933.

Dualism and the Paradox of Reference. ARTHUR O. LOVEJOY.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 23. November 9, 1933.

The Innocence of the Given. DONALD C. WILLIAMS.

Book Reviews. Journals and New Books. Notes and News.

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- Psychological Review.**—Princeton, N. J.; Psychological Review Company.
Subscription \$5.50. 540 pages annually. Bi-monthly. General. Founded 1894. Edited by Howard C. Warren.
- Psychological Bulletin.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00. 720 pages annually. Psychological literature. Monthly. Founded 1904. Edited by Samuel W. Fernberger.
- Psychological Monographs.**—Princeton, N. J.; Psychological Review Company.
Subscription \$6.00 per volume. 500 pages. Founded 1895. Edited by Raymond Dodge.
Published without fixed dates, each issue one or more researches.
- Journal of Applied Psychology.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 400 pages. Founded 1917.
Quarterly. Edited by James P. Porter and William F. Book.
- Psychological Index.**—Princeton, N. J.; Psychological Review Company.
Subscription \$4.00. 300-400 pages. Founded 1895. Edited by W. S. Hunter.
An annual bibliography of psychological literature.
- Archives of Psychology.**—Columbia University Post Office, New York.
Subscription \$6.00. 500 pages per volume. Founded 1906. Edited by R. S. Woodworth.
Published without fixed dates, each number a single experimental study.
- Journal of Abnormal Psychology and Social Psychology.**—Eno Hall, Princeton, N. J.
Subscription \$5.00; foreign \$5.25. Acting Editor, Henry T. Moore.
Quarterly. 448 pages annually. Founded 1906. Abnormal and social.
- Psychological Clinic.**—Philadelphia; Psychological Clinic Press.
Subscription \$3.00. 288 pages. Edited by Lightner Witmer. Founded 1907.
Without fixed dates (9 numbers). Orthogenics, psychology, hygiene.
- Journal of Educational Psychology.**—Baltimore; Warwick & York.
Subscription \$4.00. 540 pages. Founded 1910.
Monthly (9 numbers). Edited by Harold O. Rugg and cooperating board.
- Comparative Psychology Monographs.**—Baltimore; Williams & Wilkins Co.
Subscription \$5.00. 500 pages per volume. Edited by W. S. Hunter.
Published without fixed dates, each number a single research. Founded 1922.
- Psychoanalytic Review.**—Washington, D. C.; 3617 Tenth Street, N. W.
Subscription \$6.00. 500 pages annually. Psychoanalysis.
Quarterly. Founded 1913. Edited by W. A. White and S. E. Jelliffe.
- Journal of Experimental Psychology.**—Princeton, N. J.
Psychological Review Company. 900 pages annually. Experimental.
Subscription \$7.00. Founded 1916. Bi-monthly. Edited by Samuel W. Fernberger.
- Journal of Comparative Psychology.**—Baltimore; Williams & Wilkins Co.
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Bi-monthly. Edited by Knight Dunlap and Robert M. Yerkes.
- Psychological Abstracts.**—Princeton, N. J.
Subscription \$6.00. 700 pages annually. Edited by W. S. Hunter.
Monthly. Abstracts of psychological literature. Founded 1927.
- Journal of General Psychology.**—Worcester, Mass.; Clark University Press.
Subscription \$14.00 per yr.; \$7.00 per vol. 1,000 pages ann. (2 vols.). Edited by Carl Murchison and an international cooperating board.
Quarterly. Experimental, theoretical, clinical, and historical psychology. Founded 1927.
- Journal of Social Psychology.**—Worcester, Mass.; Clark University Press.
Subscription \$7.00. 500-600 pages. Edited by John Dewey, Carl Murchison, and an international cooperating board.
Quarterly. Political, racial, and differential psychology. Founded 1929.
- Character and Personality.**—Durham, N. C.; Duke University Press.
Subscription \$2.00. Edited by Robert Sandek and Ernest Seeman.
Quarterly. Psychodiagnostics and allied studies. Founded 1932.

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Edited by EDWARD L. SCHAUB, Ph.D.

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WHAT IS SPECULATIVE IDEALISM?

THE cry for help which I sent out to all quarters of the Universe upon the pages of this JOURNAL last March¹ brought back to me such fruitful replies, that I venture to use the same method and to ask once more the kind offices of the JOURNAL in seeking light upon a further question. Both the printed replies of Professors Barrett and Brightman² and the personal letters from several friends have done much toward answering my question, "Is Idealism Realism?" Professor Barrett in particular is very specific in his answer: idealism often is realism—or as he might prefer to put it, realism often is idealism. "The realist in epistemology is an idealist in metaphysics when he regards himself as being a genuine organic part of his real world, and when he regards that world as intelligible and looks upon the constitutive principles of his spiritual life as existing in and expressing its order." My former question, then, is answered: idealism can perfectly well be realism. But while this definite statement marks a long advance, it renders still more urgent the related question, What is idealism? This question, too, has been largely answered by my respondents. And the upshot seems to be that, disregarding many subdivisions, idealism is of two sorts, namely, mentalism and what Bosanquet and Creighton preferred to call speculative idealism. Mentalism is of many sorts,—and Professor Brightman's is one of them; but they all agree in identifying the real with some kind of conscious experience or experienter or center of psychic life. The meaning of this is abundantly clear to me; but I am not at all so certain as to the nature of speculative idealism. Hence the query I have put at the head of this paper, a query the proper answer to which, I am confident, many readers of this JOURNAL besides myself, will welcome. May this query meet with the same courteous and helpful reception as did my former appeal!

That those who are kindly disposed to help me may see exactly what are the points on which I (and, I believe, many other realists) need further light, I shall try to explain some of my uncertainties. They center around the relation of idealism to naturalism. We are frequently told that speculative idealism is to be identified, not by

¹ *Is Idealism Realism?* This JOURNAL, Vol. XXX (1933), pp. 169-178.

² This JOURNAL, Vol. XXX (1933), pp. 421-429, pp. 429-435.

any epistemological opposition to realism, but by its metaphysical opposition to naturalism. Now I am not sure how this opposition is to be expressed. Perhaps my difficulty could best be put in this way. The central assertion of speculative idealism, as I understand it, is to the effect that reality is a "*systematic*" or "*organic*" whole. Statements to this effect could be gathered from many idealists, but here, I presume, need not be quoted. Now it is the specific meaning of these phrases, "*systematic whole*," "*organic whole*," on which I need further light. I can think of three meanings any one of which might quite properly be intended. One would be the Roycean interpretation—Reality is the content (or object) of one Absolute and conscious Mind. A second possible meaning would be this: Every part of reality logically implies every other part: every entity and every event could be deduced from the remaining facts about the universe, or from the fundamental logical Structure of the Whole, without the aid of any empirical facts or observed sequences, but by the necessary laws of thought and with strictly *a priori* necessity. A third interpretation of the "*organic unity*" of the world would be that every part of reality is related to every other part in various ways, but what entities are to exist and what events are to happen and what specific relations are to obtain between them, is not determined by *a priori* logical relations, and it is to be learned (if at all) by experience.

The first of these possible interpretations of "*systematic*" and "*organic*" the speculative idealists rule out by their explicit rejection of mentalism. The second meaning would apply to and describe a purely conceptual world, a world of logic and of mathematics. It plainly does not apply to the world of existent things, of empirical science, of human lives, of the brute fact which Plato recognized and set in sharp contrast to the logical nature of the world of ideas. To know the world we live in we must use experiment and induction, so far as we can, and eke out induction with hypothesis and conjecture. It is conceivable that an All-Knower might see that our empirical laws are ultimately based on logical laws; but as yet there is no evidence which would stand for a moment in a court of science for believing that it is so. To say that the world of existence, of physics and biology, of history and of personal experience, is a world completely ruled by *a priori* logic is at the very best the expression of a pious hope. Whether our world is a world of pure logic is a question of the evidence; and certainly thus far the evidence is emphatically against any such conclusion. If speculative idealism be the assertion that our existential world is a "*systematic whole*" in this sense, then speculative idealism may be called an admirably daring hypothesis, or a case of self-deluding

wish-fulfillment; but most people will conclude that it should be classed rather as faith than as philosophy.

It is probable, therefore, that the phrase "systematic and organic whole," as used by speculative idealism, should be taken in the third sense above suggested. Everything is related to everything else in many and various ways, but just what these ways are and just how any given thing or event is related to any other thing or event is to be discovered not by *a priori* but by empirical means. Things and processes are what they are, and are not logically deducible in advance; though processes and things alike are always richly inter-related. If this be the position of speculative idealism it will meet with the approval not only of all realists, but of all naturalistic realists. In fact the agreement will be so complete that it is hard to see in what the two schools of thought differ—which is another way of saying that it would be questionable whether there were here more than one school. Thus speculative idealism would win the recognition of being true, but at the price of ceasing to have anything distinctive to say.

This seems to me a very important consideration. As I read over the replies of Professors Barrett and Brightman to my former article, with their emphasis upon the idealistic demand for cosmic system, as I puzzle over the writings of Bosanquet, Creighton, Hoernlé, and other members of their school, I find it extremely difficult to see why thinkers like Alexander, Lloyd Morgan, Sellars, and Strong should not be counted as speculative idealists. Certainly all of these realists and naturalists would admit a very real organic unity into their world. The world of each (to borrow a phrase in which Professor Barrett has described the world of idealism) is "an intelligible universe whose systematic structure is no mere mechanism but expressive of principles of rational order."³ The world of naturalism is no longer a mere collection of atoms; it is an intricate web of interrelated forces and of the emergence of new levels. Unless, then, we interpret "organic and systematic unity" in the extreme sense of an *a priori* realm of pure concepts, in what does the naturalistic world fall short of the demands of speculative idealism; and in what does the world of speculative idealism differ from it? It would be odd, perhaps, but quite comprehensible, that a philosophy which started out by defining itself through its antithesis to naturalism should be seen in the end to differ from it only in its use of labels. But if it means by its *systematic unity* neither a mind nor a purely logical and mathematical realm, is it different from naturalism in anything essential?

³ It is, of course, possible that Professor Barrett intended "*rational order*" to be taken in the sense of *a priori* logical necessity (though I think he did not.) If he did, my answer has already been given on the previous page.

And if it be only in labels that it differs, why any longer retain them? In short, if the words "organic and systematic unity" are to be taken only in the sense here indicated, is there any good reason for retaining the name "speculative idealism" or continuing to talk about it?

Professor Barrett, in his kind reply to my former question, anticipated this difficulty and sought to meet it. He pointed out, as I have done, that naturalism "might agree" with the organic view of the world which speculative idealism maintains. But he went on to draw a distinction which he thinks will sufficiently mark off the two schools from each other. "The philosophical problem," he tells us, "is that of which way the process is to be read. Is the real nature of the world, which expresses itself in both more simple and more complex forms and on both "lower" and "higher" levels of existence in the evolutionary process, to be discerned more adequately in the simple or the complex, in "lower" or "higher" manifestations? The idealist is convinced that the most developed and highest of these various manifestations of the world order provide a more adequate access to the character of reality which is being manifested, than do its simpler and lower expressions" (p. 426). It thus follows, for speculative idealism, according to Professor Barrett, that the material world should be read and understood in the light of mind; that mind provides us with the most adequate access to the character of reality. Now, quite aside from the question whether or not this is true, the important question for us is, What does it mean? I can think of two possible meanings for it. One is the interpretation of matter as a form of the psychical. But this would be mentalism and as such is consistently rejected by Professor Barrett. What else can be meant by this reading of the lower in terms of the higher? Professor Barrett tells us. It is that this is "an intelligible universe whose systematic structure is no mere mechanism, but expressive of the principles of rational order and value which are also the constitutive principles of intelligent organization of our own experience." Idealism "would give to each of the world's manifestations a genuine importance, but as a guide to the truer understanding of the world, it would assign primacy to the fullest and highest, which, in fact, it discovers to be those of *spirit*" (p. 429). It is these references to spirit and to value as something which the universe expresses which make the difference for Professor Barrett between speculative idealism and naturalism. Mere intelligible order, mere organization would not be enough to distinguish the idealistic world from the naturalistic. It is important to notice, moreover (though Professor Barrett does not point it out), that the recognition of the mere existence of values, of the

mere production of values, would not be enough as a basis for distinction between the two schools. The naturalist recognizes values and their production by the universe quite as readily as does the idealist. The distinction between the two forms of philosophy, if there be one, is to be found in the idealist's assertion that values *express* the systematic structure of the universe; or that this structure is *expressive* of values. Just what does this mean? To what explicit judgments does it refer over and above those to which the naturalist would assent? I conceive it might mean one of two things. It might mean an Absolute Conscious Mind—mentalism once more, and therefore to be rejected by speculative idealism. Or it might mean some form of theism. For this is exactly the doctrine of many orthodox and realistic theists. There is an objective world which is not to be interpreted in Berkeleyan or panpsychic fashion; but through it an all-pervading purpose runs; and it is so made that it expresses values. If this is what speculative idealism means, we have the interesting disclosure that Descartes and John Locke, Paley and the author of the Book of Genesis, were all speculative idealists. And not only would theism be a possible interpretation of speculative idealism, in the sense that the same individual might be both an idealist and a theist, but so far as I can see this is the only interpretation of it which will give specific meaning to its assertions of the position of value and the primacy of spirit. For, I ask, if these assertions are to avoid both the Scylla of naturalism and the Charybdis of mentalism, what else can they mean? To assert that as a guide to the truer understanding of the world one must assign primacy to spirit, and at the same time to deny that this is to be taken either as the naturalist or as the mentalist or as the theist understands it—what is this but to seek satisfaction in words without meaning? Yet if speculative idealism asserts merely what realistic theism asserts, why not call it theism and stop there? Such a course would at least put an end to a vast amount of apparently verbal discussion. For it is my considered opinion that the arguments used by speculative idealists against naturalism (except for those which draw their strength from mentalism and those whose impressiveness is purely verbal) will be found on analysis to be simply the ancient arguments of theism stated in somewhat new terms.

In his able and very honest work on *The Idealistic Argument in Recent British and American Philosophy*, which has just been published, Professor Watts Cunningham lays repeated stress, as does Professor Barrett, on the fact that speculative idealism recognizes and insists upon the objectivity of nature, and rejects with emphasis every form of mentalism. The distinction which he draws

between speculative idealism and naturalism is perhaps not essentially different from that maintained by Professor Barrett, but it is, at any rate, expressed in different words. It is this. Speculative idealism differs from naturalism in that it "resolves matter into a system within which mind or spirit is held to be of basal logical significance." "The real nature of matter," he tells us, "cannot in the end be adequately conceived without reference to mind or spirit as logically basal within the conception" (p. 338).

In calling Professor Cunningham's book *honest* I had in mind the frank and downright fashion in which he, who still considers himself an idealist, exposes the fallacies of most idealistic argumentation. In support of idealism, he tells us, three types of demonstration have been tried, which he calls the epistemological argument, the argument *a contingentia mundi*, and the ontological argument. Each of these he considers at length, and his conclusion is that the first and third are decidedly unsuccessful, and that only the argument *a contingentia mundi* proves anything. I can not make sure, however, just how much it is that this argument, in Professor Cunningham's opinion, has succeeded in proving. Plainly it has sought to show that the world, though very complex, has a great amount of unity, and that the complete understanding of any part would involve a comprehension of all the rest. But the argument certainly does not prove (and I can not find that the author would claim that it proves) the proposition which was presented as the distinguishing feature of speculative idealism as contrasted with naturalism. Nothing is said in the whole discussion of this argument to show that matter necessarily has "an implicative relationship to mind or spirit," in any sense which naturalism would deny. Doubtless, since all things are in part characterized by their relations, and since everything is related to everything else, "matter can not in the end be *adequately* conceived without reference to mind"; but surely there are very few adherents of naturalism who would not assent to this, since it is, in fact, almost an analytic proposition. If the "implicative relationship to mind" be taken in this sense (and it is the only sense which has at all been proved by the idealistic arguments), there is nothing in it to distinguish speculative idealism from naturalism.

One way in which speculative idealism seems to be distinguished from naturalism in the writings of some idealists is by the use of the word "experience." Readers of the objective idealists and pragmatists will recall the rather indefinite, not to say lax and question-begging, way in which this word is sometimes used by both these schools so as to include under it all real and all possible objects of experience (whether or not they ever have been or ever

will be actually experienced by anyone), and thus in the end to make *experience* equivalent to reality as such.⁴ This bewildering Certainly long-established English usage regularly implies by the word in question some kind of subjective reference. As *Baldwin's Dictionary* puts it, "an experience in the historical and ordinary application of the term is a phase of conscious life which some individual 'passes through' or 'undergoes.'" But my interest here is not in challenging an uncommon use of the word, but in pointing out that the word either does or does not imply the subjective. If it does not, if *experience* is to be taken quite objectively, then in saying that nature or matter *implies* or *involves* or *is within* experience, nothing is asserted in the least inconsistent with naturalism. If, on the other hand (as is usually the case), the idealist uses the word in its ordinary subjective sense, it is questionable whether he can utilize it as a means of distinguishing his position from naturalism without falling into mentalism. From this point of view the following sentences from Professor Cunningham's exposition of Creighton are interesting:

"Speculative Idealism denies *in toto* the thesis [of Mentalism] that the object of knowledge must be reduced to terms of mind. It takes the standpoint of concrete experience, which is also the standpoint of common sense and science. It begins by viewing mind and the objective system of nature as distinct, and it never dreams of identifying them; they remain distinct to the end. But Speculative Idealism does not permit their distinction to blind it to the fact that they are complementary; they are for it *aspects of that conscious life which is experience*. . . . Experience is at once an explication or revelation of reality, a comprehension of the minds of one's fellows, and a coming to consciousness on the part of mind of the nature of its own intelligence."⁵

This passage is to me bewildering in the extreme,—and I dwell upon it because it is such an excellent example of the sort of thing

⁴ Cf., for example, Creighton, *Studies in Speculative Philosophy*, pp. 271, 274; Hoernlé, *Idealism as a Philosophy*, pp. 69, 79. Bosanquet frequently uses the words "experience" and "mind" in this objective sense—as, of course, does also Hegel.

use of the word seems to me an attack upon the English language.⁵

⁵ The Oxford *New English Dictionary* gives eight meanings for the noun "experience"; the *Century* gives six; but the use of the word to which I am objecting is not to be found in either. *Baldwin's Dictionary* says, "The word [experience] is used so vaguely and ambiguously by writers on philosophy that definition is difficult. We find, for instance, such writers as Royce and Bradley speaking of an 'absolute experience' which is not subject to time conditions. This usage seems to deprive the word of all distinctive meaning."

⁶ *Op. cit.*, p. 296. The italics used are mine. To make the meaning plainer I have added to the first sentence quoted a few words which, in the text, preceded it.

in idealistic writing which staggers us realists. We are assured, to begin with, in emphatic fashion, that speculative idealism rejects, and even spurns, mentalism, and then we are told that the objective system of nature is "an aspect of that conscious life which is experience." To say that nature is an aspect of conscious life would seem to be as explicit a way of stating mentalism as could be devised; it is hard to see how it could be put more clearly and emphatically. The definition of experience (of which nature is an aspect) is also, it will be noted, carefully expressed in specifically subjective, mental, terms. "Explication," "revelation," "comprehension," "a coming to consciousness" would appear to involve consciousness if any words can. If the idealistic assertion is that nature is an aspect of experience in this sense, is not speculative idealism as plainly to be identified with mentalism as it is to be distinguished from naturalism? Have we not here a case of the proverbial jump from the frying pan into the fire?

This perpetual *wabble* (if I may be pardoned for using the term) between a naturalistic realism and a mentalistic idealism is illustrated in several of Professor Creighton's papers that are reprinted in the posthumous volume entitled *Studies in Speculative Philosophy*. A considerable part of these essays is devoted to the attempt to find a specific position for speculative idealism which shall be neither mentalistic nor naturalistic; but, as I read the book, the author never succeeds in discovering, or at any rate in defining, it. Is the objective world actually experienced or only experienceable? Professor Creighton can never make up his mind. Or rather, he makes up his mind differently at different times according to the emergency and the opponent.⁷ His uncertain treatment of the key word "experience" has already been referred to. On closing his book it is impossible for me at least to say just what he means by the objective world and just what is its relation to consciousness. A similar uncertainty hangs around the position of speculative idealism as described in Professor Chambers' recent review of Sellars' *Philosophy of Physical Realism*.⁸ Four pages are devoted to a sympathetic statement of Sellars' position and to reiterated assurances that the idealism of Hegel and Bosanquet is in hearty agreement with it. Yet at the close Professor Chambers can not agree with Sellars after all. "Knowing, just because it 'involves a peculiar transcendence,' need not be directed at a wholly transcendent object; the object may be directly, yet only partly, known. Had Sellars been willing to acknowledge this possibility . . .," etc. As all readers of Sellars' book will recall, he not only

⁷ Cf., for example, pp. 241, 267, 280-282, and the essay on "The Determination of the Real."

⁸ This JOURNAL, Vol. XXX (1933), pp. 495-500.

acknowledges but repeatedly asserts that part of the object is directly known in every sense save that of the existential identity of the object with the knowing act or state. This existential identity between mind and object is the only "possibility" which Sellars has been "unwilling to acknowledge." Since, then, Hegelian idealism in Professor Chambers' opinion breaks at this point with critical realism and is not here to be identified with Sellars' realistic naturalism, it would seem that it must make the existential identification referred to. This would indeed differentiate it from realism, but at the cost of identifying it with mentalism.

I shall refer to but one more way in which speculative idealism, while still insisting on its rejection of mentalism, seeks to distinguish itself not only from naturalism but from all forms of realism. It refuses, namely, to recognize any epistemological problem. Everyone will recall the self-congratulation with which Schelling and the earlier Hegelians spurned the meticulous discussions of the British school, and "broke through" to the objective. In similar vein, Creighton (to use for brevity's sake Professor Cunningham's excellent exposition), asserts that "for Speculative Idealism there is no 'epistemological' problem in the sense in which the realists love to debate it—in the sense, namely, of a problem as to how the mind as such can know reality as such. The very acceptance by speculative idealism of the standpoint of experience renders this problem obsolete. 'Without any epistemological grace before meat it falls to work to philosophize, assuming, naïvely, if you please, that the mind by its very nature is already in touch with reality. Instead, that is, of assuming that there is an entity called mind, and another entity having no organic relation to mind called nature, it assumes on the basis of experience that these realities are not sundered and opposed, but are in very being and essence related and complementary.'"⁹

Similarly Professor Barrett, in his recent article in this JOURNAL writes: "For the objective idealist the 'Epistemological Gulf' as understood by certain forms of realism, does not exist except upon a fictitious map of the universe. Man is not a spectator, who, as an alien from another world might do, must seek to comprehend a natural order foreign to his own nature and complete apart from himself."¹⁰

I could understand how the sentences quoted from Creighton and Professor Barrett could quite naturally be written by a certain type of mentalist. But it is difficult for me to see how a philosophy which insists on "viewing the mind and the objective system of nature as distinct and never thinks of identifying them"—it is

⁹ *Op. cit.*, p. 298.

¹⁰ Pp. 424-425.

difficult to see how such a philosophy can fail to find an "epistemological gulf" or can seriously assert that there is no epistemological problem. The very assertion that mind and objective nature are distinct, states the problem and points to the gulf. Doubtless the mind is in some sense "in touch with reality." No realist denies this. No realist, so far as I am aware, asserts that nature has "no organic relation to mind." With the speculative idealist, the realist asserts that mind and nature are in one universe; that mind grew out of the universe of which nature is a constituent part, and that nature is such that its structure and processes are capable (at least in part), of being known by mind. But all this being true, the problem still looms very large: inasmuch as mind and nature are "distinct" and not to be identified, what is the process by which the one knows the other? The motions of the stars, the activities of the atoms, the life stories of the beasts, and of other men, these are not parts of my mind. How then can I and do I know them: what is this process of being aware of something which is not the content of my consciousness? The question is a very puzzling one. There are at least half a dozen distinct theories on the question, for each of which much might be and has been said. The elaboration, criticism, and analysis of these theories is occupying many of the ablest philosophical minds of our generation. I see nothing in this problem that is "obsolete." And if the answer is all so simple as the idealist implies, why does he not let us have it? But let me remind him that the answer must be more explicit than simply the (not very surprising) information that the mind and its object are in the same world.

Much the same sort of thing must be said as to the epistemological gulf. It is hard to see how Professor Barrett can deny the gulf when it is so patent to any reader of our two articles that he fails to understand me and I fail to understand him. Is there not plainly an epistemological gulf between our minds? A gulf, moreover, (at least as the realist views it) does not mean an impassable space. The reality of gulfs is not incompatible with the existence of bridges. A gulf, in fact, is just the sort of thing that bridges span. Not all gulfs are as yet bridged but some of them are and many more may be. Furthermore, if there were no epistemological gulf between the mind and the object which it seeks to know, it is hard to see how error could ever be possible.

And while this matter of the theory of knowledge is before us, let me, in a parenthesis, make a confession about us realists. When a discussion concerning this very difficult question arises it is not only bewildering for us but also just a little bit irritating to find our fellow laborer, the idealist, not only "side-stepping", this

obvious and perplexing problem but patting himself on the back for so doing. To see a man refuse to have anything to do with a difficult task which his colleagues are sweating blood to accomplish is something which, with the aid of philosophy, can be borne in silence; but we realists have still so much of the Old Adam in us that occasionally we can not help voicing a very mild protest when this refusal to coöperate is accompanied with a complaisant expression of self-conscious superiority. Dear idealist friends, please forgive me!

But this is an aside. To return to what we were discussing, i.e., the refusal of the idealist to see either an epistemological problem or an epistemological gulf, and his easy assurance that all difficulties about knowledge vanish once we realize that mind and nature belong to the same system. To some of us, this attitude of the idealist at once suggests that for him nature and mind are not so very "distinct" after all, and that he is still nourishing the old idealistic notion of their ultimate identity. If there be no epistemological gulf between the mind and the object to which it refers and hence no problem about bridging it, it begins to look very much as if the object were identical with the immediate content of awareness. And surely if nature and awareness have this intimate relation for the idealist, it would seem pretty plain that he is back in mentalism once more.

Let me try to express briefly the essential point of this long discussion. Speculative idealism is a metaphysical theory about the unity of the cosmos. On this cosmic problem there are four or five familiar hypotheses. One of these is mentalism, another is naturalism, a third is that of a realistic world with many material objects and many finite (and possibly free) selves. A fourth is theism—an old-fashioned "realistic" doctrine. Is speculative idealism simply a new name for one of these ancient theories? I can think of a fifth hypothesis, which might be taken as a variant of the second or third. It is that of a world full of situations and events which *look* as if they had been purposed though they really were not; a world that *seems* to respect values, though as a fact this semblance is entirely inexplicable. It is the hypothesis that things are as if there were a God, but there isn't. I wonder if this is what speculative idealism really comes to. If it is none of these five theories, what is it? Will somebody tell me?

JAMES BISSETT PRATT.

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HEGEL'S ATTITUDE ON WAR AND PEACE

HEGEL'S political philosophy and his attitude to war and peace lend themselves to various interpretations. At least, many varying attempts have been made to interpret or appraise them. This was especially true at the time of the World War. In his account of Hegel's philosophy of history Dewey then concluded, "Philosophical justification of war follows inevitably from a philosophy of history composed in nationalistic terms."¹ Muirhead, on the other hand, contended that "there is no ground to ally his [Hegel's] political teaching with militarism as we are learning to know it to-day."² In Germany itself not a few of the adherents or admirers of Hegelianism were disposed to accept the sterner interpretation of the doctrine, but for a different end than that pursued by alien critics: not in order to condemn the war but to support it by the authority of the master. The most extreme among these writers found war inherent in the dialectic method and the developmental view of the world of spirit. Others—and the work has been continued since the close of the war—traced the fulfillment of Hegelian theories in the "Ideas of 1914," or referred the genesis of the latter, it might even be the whole ideal background of later German history, to the political principles which Hegel had inculcated.³

In spite of this divergence of opinion one point is incontestable: Hegel's conception of the state, in particular his conception of the state in its international relations, and his estimate of peace and war departed widely from the views of his predecessors, Kant and Fichte. Kant had defined the goal of universal history as the establishment of an international legal order under a League of Nations which should foster perpetual peace. Fichte had adopted the Kantian idea of a federation of peaceful states; had deprecated war except in defence of an endangered fatherland, or against outlawed nations and barbarian peoples; even, in the visions of his final year, had looked forward to a time when in the Christian nations the principle of force and the compulsive state would give way to a political

¹ *German Philosophy and Politics*, 1915, p. 118.

² *German Philosophy in Relation to the War*, 1915, pp. 35-36.

³ Cf. Frieda Wunderlich, "Hegel und der deutsche Krieg," *Archiv für systematische Philosophie*, Vol. XXI, 2, 1915; G. Lasson, *Hegels Sämtliche Werke*, Vol. VIII: Hegel's *Einleitung* to his *Philosophie der Geschichte*, 2te. Aufl., pp. vi-vii; H. Heller, *Hegel und der nationale Machtstaatsgedanke in Deutschland*; F. Meinecke, *Weltbürgertum und Nationalstaat*, Bk. 1, Chap. 11, *Die Idee der Staatsräson in der neueren Geschichte*, 3d ed., Bk. III, chap. 1, especially p. 447. J. Plenge's *1789 und 1914. Die symbolischen Jahre in der Geschichte des politischen Geistes* is less closely reasoned.

organization based entirely on love or good-will.⁴ For Hegel an essential characteristic of a state was power, and power described to a notable degree in terms of physical force. The conception of the state as *Macht* was reached in the early part of his professorship in Jena as he advanced toward his philosophical maturity, and formulated in *Die Verfassung Deutschlands* which was completed in 1802 (though it was not printed until 1893). The opening sentence of this monograph runs *Eine Menschenmenge kann sich nur einen Staat nennen, wenn sie zur gemeinschaftlichen Verteidigung der Gesamtheit ihres Eigentums verbunden ist.*⁵ And the idea was not abandoned when the larger and richer conception of the political body as an organic *sittliche Totalität* had been fully developed. Rather, as it has been acutely remarked, even if the element of force was made less prominent in the internal analysis of the state, it was still emphasized as lying at the basis of its external relations, of the interrelations of nations at large. *Der innerliche Staat als solcher ist die Zivilgewalt, die Richtung nach aussen die Militärgewalt.* . . .⁶

For the state—already unified in virtue of its inner organization—stands as an individual body over against other individuals. And individuation involves negation, a relation of distinction and exclusion, the moment of war as well as that of peace. Self-dependence “is the first freedom and highest honor of a people,” and each state has the right to exact recognition from its fellows as in turn it owes recognition to them unless they be unworthy. The idea of a federation of states to moderate international quarrels, or even of the Holy Alliance, is therefore impossible of realization. If a number of states should in this way form themselves into a family, the group as a new individual whole would create opposition and develop a new enemy. Within the state there exists a final authority above the individual citizens which controls their relations with one another. As between states there is, and there can be, no such superior power: there is no “praetor” to constrain the decision of international causes. International law thus must be contractual in its nature, dependent in every case for its application and observance on the will of the individual nations concerned. The peaceful adjustment of international differences can be effected solely by voluntary arrangement. Mediation and arbitration are the only

⁴ Cf. the writer's “Kant's Philosophy of Peace and War” and “Fichte's Conception of a League of Nations,” this JOURNAL, Vol. XXVIII, pp. 197–204, and Vol. XXIX, pp. 153–158.

⁵ Hegel's *Sämtliche Werke*, edited by G. Lasson, Vol. VII, 2te Aufl., p. 17. All the references in this paper to Hegel's works are to Lasson's edition.

⁶ *Philosophie des Rechts*, § 271 Zusatz (S.W., Vol. VI, 2te. Aufl., pp. 356–357).

available means of settling controversies between individual states short of actual warfare. It is true that certain factors relieve the situation. The reciprocal recognition of one another by enemy states, continued even in war time, determines that hostilities should be carried on in a way to preserve the possibility of restoring peace. The European nations form a family in virtue of their legislation, principles, and culture, so that their conduct in war, in accordance with international law, is more moderate than it otherwise would be. None the less conflict is the normal relation between states when contested issues are at stake.⁷

A federation of states, then, and perpetual peace are mere dreams. Further in Hegel's view perpetual peace is not only impossible, it is also undesirable. For war is not to be looked upon as an absolute evil. This position he affirmed and reaffirmed. The remarkable passage in the essay *Ueber die wissenschaftlichen Behandlungsarten des Naturrechts*, 1802, declares that through war "the ethical (*sittliche*) health of peoples is preserved . . . as the movement of the winds preserves the seas from the corruption into which they would be brought by a settled calm, and the peoples by a lasting, not to say perpetual peace." The celebrated estimate of war in the *Phaenomenologie des Geistes*, 1807, is described even by an admirer of Hegel's doctrine as *ungeheuer*.⁸ In this Hegel urges that the government from time to time has to plunge the community into war in order to shatter to their centre the self-isolating and divisive tendencies inherent in systems of property and personal independence, associations for gain and enjoyment; to let individuals, who, immersed in these movements, are breaking off from the whole and seeking their own security, feel the power of their master, death; and to guard against falling away from the ethical (*sittlichen*) into the natural order of existence. The *Philosophie des Rechts*, 1821, renews and develops the argument of nineteen years before and quotes again the passage from the earlier work on the function of war in guarding the state from corruption. It adds, however, a notable qualification, that these views constitute "only a philosophical Idea, or as it is often otherwise expressed, a justification of Providence and . . . actual wars require another justification."⁹

⁷ *Philosophie des Rechts*, §§ 321-324, 324 *Zusatz*, 331-334, 338, 339 and *Zusatz* (*S.W.*, Vol. VI, pp. 261-264, 368-369, 266-268, 270, 371).

⁸ Theo. Ziegler in *Hegels Anschauung vom Krieg*, *Archiv für Rechts- und Wirtschaftsphilosophie*, VI, 1, 1912. This is an excellent brief discussion of the subject.

⁹ *S.W.*, Vol. VII, pp. 368-369; Vol. II, *3te. Aufl.*, pp. 323-324; Vol. VI, pp. 262-264, 269-270, 368-369 (*Philosophie des Rechts*, §§ 324 and *Zusatz*, 336-337)."

Continuing the development of these principles, Hegel reaches a ready answer to the vexed question of the relation of politics and morals. His conclusion is simply that the two are in no wise related. They move on different planes, they belong to spheres which do not touch. In the *Verfassung Deutschlands* it is remarked, *der Staat hat keine höhere Pflicht als sich selbst zu erhalten* . . .¹⁰ Or as he restates the doctrine in another way, the laws of individual morality are general maxims empty of concrete content. Politics and statesmanship have in every case to take account of the concrete elements of the national life and of the issues in question. The master principle is always the welfare of the political body as the realization of reason, *die sittliche Substanz*. And this is the welfare of a particular state, over against other states, with its definite interests and in a definite situation, dependent also on specific external circumstances and related internationally under special treaties and agreements. The belief in the opposition between politics and morals and the culpability of rulers in this connection rests chiefly on shallow ideas concerning morality, the nature of the state and the latter's relation to the moral point of view.¹¹ The need for concreteness, moreover, grounds the qualification of the general justification of war to which reference has been made at the close of our last paragraph. *Die Regierung ist somit eine besondere Weisheit, nicht die allgemeine Vorsehung*; and the basis for establishing the justice of wars and treaties is the welfare of the state, as hindered or threatened, in its particularity.¹² Finally, the differentiation of private and political duty is completed by reference to the progress of world-history. Here *a fortiori* the interest of reason, now the universal reason, is paramount. The ultimate end of the spirit, that which Providence brings about, transcends individual obligation. The right of the absolute spirit takes precedence even of the right which obtains between states and which grounds their mutual independence.¹³

Hegel's distinction between war in principle and the justice of a given war has an important bearing on the evaluation of his political philosophy. But it has been frequently neglected in war time by the critics of Hegelianism as well as by those who appeal to its authority in support of the policies of their respective fatherlands. And this applies not only to the great World War, of which mention

¹⁰ *S.W.*, Vol. VII, p. 114; cf. the whole discussion, pp. 108-116.

¹¹ *Philosophie des Rechts*, §§ 336-337 (*S.W.*, Vol. VI, pp. 269-270).

¹² *Ibid.*, § 337.

¹³ Cf. Hegel's *Einleitung* to his *Philosophie der Geschichte*, *S.W.*, Vol. VIII, pp. 127-128, 153-154. This final element in his discussion of politics and morals is strongly emphasized by Meinecke, *Die Idee der Staatsräson*, pp. 441-453.

has already been made, but also to other times of conflict. A generation and a half before 1914 similar discussions went on concerning the relation of Hegel's teaching to the events of the struggle between Prussia and France.¹⁴ The argument in these crises takes either a general or a special form. In general it has been urged that the Hegelian dialectic and the principle of development through opposition necessarily presuppose armed conflict. But the contention seems to be based on vague interpretations of terms or in its inclusiveness to prove too much. At least, it can not hold in every field. For instance, it can hardly be maintained that war is a necessary factor in the dialectical evolution of the categories, or in esthetic progress, or in the Hegelian construction of the Christian Trinity. If, on the other hand, the conclusion is limited to the state and history, the argument approximates the more special type. In this phase, although greater support might be found in Hegel's analysis proper of the state and international relations,¹⁵ recourse is often taken to his celebrated view of universal history. In each age some one people is best fitted to serve as the vehicle of the spirit of the world and to further its end. So long as it fulfills its mission this people remains dominant; when it ceases to be adequate to the task it loses its preëminence, and a new era begins as it is replaced by some other people better able to carry on the work. So peoples rise and fall. In their blindness men and nations believe that they are considering their particular interests and pursuing their own designs. In reality they are working in the service of the universal reason, and the outcome determines their fate. *Die Weltgeschichte ist das Weltgericht.*

From this doctrine certain corollaries are drawn by the critics or defenders of a particular war. They infer that the world-judgment is realized through war, that the rise and fall of peoples, their replacement by one another, depend on physical force. Then the principle is applied to the special case. On the one side the conflict is described as the legitimate defence of national interests; the other condemns it as barbarism seeking cover for an unjust attack under the shield of a philosophical theory. Both are apt to overlook the fact that other causes enter into the determination of the growth and decline of nations besides force alone. Hegel, on the contrary, was well aware of this truth. And it is noticeable how frequently in his *Philosophy of History* he stresses the unwarlike factors in the history of the nations. In certain sections of the discussion he seems almost to recognize none but these. Such passages, it is true,

¹⁴ Cf. E. Beaussire, *Le Centenaire de Hegel en 1870*, *Revue des deux Mondes*, Vol. 91, Jan. 1, 1871, referred to by F. Rosenzweig, *Hegel und der Staat*, Vol. II, p. 259.

¹⁵ Cf. pp. 685-686 and note 7 above.

must not be pressed, for they run counter to others in which the part played by war in history is plainly set forth. In view, however, of the balance of the emphasis, it is hardly too much to say that Hegel assigns to it a subordinate rôle. "With [inner conditions] there is commonly joined external force, which deprives the people of its dominance and makes it cease to be first. This external force, however, belongs to the phenomenal order only (*Erscheinung*); no power can make itself felt against the spirit of the people or work destructively within this, unless it is dead in itself."¹⁶

In sum, Hegel was less averse to war than his predecessors, Kant and Fichte, and much less favorable than they to the endeavor to establish permanent peace. Further war is involved, logically and in fact, in his political philosophy. It is possible, however, to magnify the importance of its position in his system. The danger of such exaggeration increases when, in the heat of some international struggle, the metaphysical principle is applied to the particular case. It reaches its maximum with the attempt at a juncture of this kind to make use of the Hegelian interpretation of the march of universal history.

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BOOK REVIEWS

Association Theory To-Day. EDWARD S. ROBINSON. New York and London: The Century Co. 1932. Pp. viii + 142.

The Nature of Learning. GEORGE HUMPHREY. New York: Harcourt, Brace and Company. 1933. Pp. vii + 296.

The Dynamics of Education. HILDA TABA. Introduction by William Heard Kilpatrick. New York: Harcourt, Brace and Company. 1932. Pp. xvi + 278.

These three volumes bear active witness to the present-day interest in the nature of learning. The first volume, by Professor E. S. Robinson of Yale, offers an analysis of certain significant aspects of the learning process, in such a manner as to show the continuity between modern psychological views of learning and classical associationism. The second volume, by Professor George Humphrey of Queen's University, presents an elaborate analysis of the process of learning in relation to the biological make-up of the living organism. The third volume, by Dr. Hilda Taba, introduced by Professor Kilpatrick of Columbia, evaluates certain aspects

¹⁶ *Philosophie der Geschichte: Einleitung, S.W.*, Vol. VIII, p. 47. V. Heller, *op. cit.*, II, especially pp. 117-124, 129-131 for the extreme statement of a view of Hegel's position opposed to that which is taken in the text.

of the psychology of learning in relation to so-called progressive educational practice.

Professor Robinson begins his book with a survey of the importance in classical psychology of the concept of association. He concludes that the best meaning that can be given to the term is "the establishment of functional relations among psychological activities and states in the course of individual experience." On the basis of this definition he says, in a manner that is thoroughly convincing to the reviewer, that much of the adverse criticism that has been aimed at this concept has gone wide of the mark. Most of those who have offered criticisms of association have objected not to association as a description of certain psychological facts, he points out, but they have rather offered a criticism of the ordinarily accepted principles of scientific method. The author builds on this foundation a consideration of the nature of the items which have been in the history of psychology considered as the entities to be associated. The claims of ideas, stimuli, responses, mental elements, neurograms, and the like, are evaluated, as is the part played by association in an understanding of the so-called psychological dispositions. The terms "instigating" and "instigated" items or acts are proposed as neutral expressions unencumbered by the difficulties intrinsic in some of the earlier formulations of association. On the basis of this consideration, the author turns to a treatment of simultaneous and successive association. Here the facts of association are dealt with in such a manner as to demonstrate that the *gestalt* concept of "insight" really deals with phenomena that have long been recognized, described, and in a sense explained by associationists.

The next sections of the book are devoted to a clear exposition of the so-called laws of association. Here the following principles, among others, are treated: contiguity, assimilation, frequency, intensity, duration, context, acquaintance, composition, and individual differences. In evaluating these various principles, he says:

It is my firm conviction that the facility of associative fixation is a function of all of the factors enumerated. Probably several specific relationships are involved for each named factor and almost certainly there are other factors which have not been included in this list. But, if the assumption that these factors are important determiners of association be correct, then there are "laws" of these factors whether our knowledge of them is definite or not. If this point hinges upon a realistic philosophy, it is only the realism by which science lives her everyday life, whatever scientists may say when they make up stories about her.

Especially in the evaluation of the association theory as it stands to-day in scientific psychology does the author show himself to have the point of view of an experimental investigator rather than that

of a seeker after a complete philosophy of mind. He says, "So long as the association theory remains at the scientific level there are a number of profitless quarrels that can be avoided." To the reviewer the entire book is itself eloquent testimony to this fact. It celebrates association not as a final philosophy, but as a means of making possible a clear and historically authenticated scientific description of certain of the most important aspects of human psychology, those aspects which deal with the modification of human experience and behavior.

Turning to the second of the three volumes, that by Professor Humphrey, we find a real shift of emphasis. In this work a searching analysis of some of the basic concepts of the physiological psychology of learning is presented. This analysis is offered in such a way as to make possible a naturalistic description of learning. Humphrey attempts a scientific description of certain aspects of behavior without implying the hypothesis that special principles must be postulated for organic events which do not also apply to inorganic phenomena. He does, however, hold that certain inorganic processes do exhibit a property of "conservation"; that is, they sometimes, when in systems, show a tendency to reinstate some special feature of the original state after that state has been disturbed. This property of conservation or self-conservation can only be understood, it is alleged, if it is referred to a precisely defined concept of *system*. Therefore, over ninety pages of the book are devoted to the explication of this concept as it is relevant to the inorganic world and to organisms. In this treatment the general nature of systems is first considered. Here the word itself is defined as "a complex or aggregate of elements which are considered to be connected by a special set of relations. . . . The system is thus a whole of parts, the wholeness being given by the relations existing between the constituent elements." This view is made clear by examples from logic, mathematics, and natural science. In these examples care is taken to distinguish between the internal and external relationships of systems. In discussing inorganic systems especial attention is given to the implications of the Le Chatelier-Braun Rule, which is stated as follows: "If a change occurs in one of the factors determining a condition of equilibrium, the equilibrium shifts in such a way as to tend to annul the effects of the change." The vital system is then explicitly characterized, especially in respect to the property of maintenance of form in constantly varying material. In connection with this description many excellent examples of the concept of system are given, taken from the work of such physiologists as Adrian and Hecht on the basic energy relationships between the external environment and the receptor mechanisms of the living

organism. On the authority of this work it is held that: "The organism's power of economical response again depends on the establishment of a special biological equilibrium to change of external conditions."

Humphrey then attempts to show that learning may be considered as just such a conserving action in the living system of the organism, when such a system is considered as existing in time; that is, he says:

Learning involves the process of making a systemic adjustment, which may be expressed in the form of a series each term of which is a series of more elementary adjustments. It seems to be unique because there is a tendency to analyse the actions of the organism into single responses without reference to the series which is their context.

In other words, learning is an act of adjustment to a complex, repetitive situation. Between the reaction of amoeba to light and the process by which a child learns to read there is said to be no qualitative break in the factors necessary to describe behavior. On the basis of learning so considered, habituation is defined as "an instance of the living system's power of establishing a conservative equilibrium to change of external conditions." In developing this view a clear summary of many relevant experimental studies in learning is offered.

He then offers a significant and novel consideration of association and of the conditioned reflex. After a critical and richly documented presentation of Russian and American work on conditioning, he offers the following description of the conditioned reflex in the terms of his own system:

As the organism lives it effects a progressive four-dimensional integration—that is what is meant by its remaining the same organism; when a conditioned reflex is formed, the organism is so constituted that it can make a single conservative Response to a series of double stimulations, such total Response being constituted of a series of lesser partial responses. At any stage reaction to the "conditioned" stimulus is thus part of the total Response to a total repetitive food-bell Situation stretching into the past, and is consequently modified; just as response to a single letter-sign is modified by inclusion in a larger unit such as a word, or for that matter any fresh context. Such modification, due to inclusion of a stimulus in a four-dimensional stimulus-complex, is the formation of the conditioned reflex.

Next he discusses the theoretical place of the conditioned reflex, when so described, in the general theory of learning. In this chapter he explicitly recants his own early, enthusiastic, and to the reviewer, it must be admitted, most successful, espousal of the principle of conditioning as the basic clue to learning and even to the Freudian mechanisms of personality. He now asserts that conditioning, far from being the fundamental and typical sort of learn-

ing, is rather a very special case of learning, in which simplification has been carried to its ultimate extent, to an extent, that is, where it has lost some of the "robust" characteristics of the habits of every-day life. On the basis of this criticism he then deals with the special problem of learning as it is controlled in the maze situation so typical of animal experimentation. After considering the general problems of maze learning he takes up the specific problem of the elimination of error in the maze. This problem is a ledge upon which many fair sailing theories of learning in the past have suddenly been wrecked. The solution that is offered here can best be judged by the reader in a direct quotation:

Thus the total behaviour of the animal during twenty experimental sessions may be considered as forming a single Response to the total Situation which is twenty-successive-presentations-of-the-maze. Regarded in this way, improvement of performance is seen as the gradual approach to a position of equilibrium; this represents a stage beyond which improvement can not go, and is in every way comparable to the organic equilibrium achieved when the organism is confronted by a non-repetitive situation. Such equilibrium is not reached because the organism is a system; for we know well that many animals can not learn the maze. Maze equilibrium is rather reached because the organism is a system constituted in a certain way.

This paragraph, indeed, more than summarizes Professor Humphrey's view in regard to the elimination of non-adaptive acts in learning. It really epitomizes his whole thesis which, it seems, most briefly stated, is that learning may be considered as a form of adjustment of the organism to the environment by means of which a state of equilibrium is established or re-established. With this point of view the reviewer can take no general issue. Certainly Dr. Humphrey has done a service in showing the relation between the so-called process of learning and other living processes of the organism. But, in the evaluation of the contribution of the concept of equilibrium to the learning problem, the reviewer finds himself, to say the least, perplexed. Down through the years there have been physiologists and psychologists, with systematic bent, who have found in the process of equilibrium a satisfying concept by which it would seem almost all things could be "explained." In different systems and with different points of emphasis the position of Humphrey is similar to the basic positions of Hering, of Semon, and of Rignano, and of many others in this connection.

The criticism of the present book must be the general criticism of all such theories which see in any form of equilibrium an explanation rather than a more or less incidental and unfortunately even a more or less irrelevant description. This is possibly most clearly illustrated in the following quotation from Humphrey:

That is to say, the arrival at the learned or "equilibrium" state in relation to successive presentations of food-in-the-maze tends ultimately towards the conservation of the system. The elimination of errors or unnecessary, "useless," movements is then another way of stating the fact that in these more complicated cases the general rule still holds; not an equilibrium, but a conservative equilibrium has been reached by the organic system.

Such statements do not, in the understanding of the reviewer, at any rate, advance very far the scientific knowledge of the behavior of the rat in the maze. The mechanistic description of the process of learning may end with the statement that thus equilibrium is restored. Surely such a statement does not tell the experimental psychologist or the neurologist the detailed nature of the mechanisms and conditions by which the otherwise magical restoration of the system is secured. It is significant that in all the descriptions of these processes of restoration the words "tendency" or "power of establishing an equilibrium" are employed. To the reviewer it would seem that this usage might lead to the very reification of abstractions against which Humphrey himself inveighs so successfully. Save in statistical terms, the meaning of the word "tendency" or "power" in relation to the organism is difficult to define scientifically. In conclusion, therefore, it may be asserted that Professor Humphrey's book presents its greatest value in that it has shown the process of learning to be a process analogous to many other significant biological processes, rather than in its particular interpretation of the concept of equilibrium.

The basic point of view of the third of the three volumes under review is different from the two which have just been considered. Dr. Taba has not seen fit to deal with the modern factual psychology of learning, save by occasional and incidental references. She has rather set up a philosophical system, substantiated by references to sub-atomic physics, culture philosophy, and the practice of self-consciously progressive education. The book is said to be an attempt "to look into the laws, modes and methods involved in the intercourse of phenomena, seeking to provide them with dynamic interpretations and make them serve as a guide for the analysis of human experience in the light of dynamic methodological principles."

She then turns to consider for almost one hundred pages the principle of *becoming*. This principle, apparently taken from Spengler, is nowhere very clearly defined in the book, but the reader is told that it can only be understood from the "dynamic approach." It is in some sense a cumulative, qualitative change that is held, nevertheless, to be a fundamental aspect of organic phenomena. We are told that "Ignoring this aspect has been fatal for science—that have been dealing with organic phenomena in a

mechanistic manner." The whole tone of the book is dynamic and radically anti-atomistic. Thus the concept of the "whole" of *gestalt* psychology, for example, is dismissed in favor of the concept of "domination of the unit by the system," because it "seems to be more acceptable precisely because of its indefiniteness." Following the treatment of *becoming*, the author turns to consider the nature of purposive behavior in relation to learning, the aim of education, and "curriculum thinking." In the introduction to this work Dr. Kilpatrick says: "Too slavishly have psychology and the social sciences followed the methods devised by the exact sciences for dealing with physical problems." This may be so, but if so the reviewer sincerely hopes that he may continue in his slavery. Those, therefore, who would not see the present book through the eyes of such a bondman must read it for themselves. There are still some, however, who believe that analysis, experimental isolation, measurement, and the whole apparatus of exact science can be applied to the study of human nature. Such readers will possibly be excused if this book makes them feel that the theoretical basis of so-called Progressive Education is, like its very procedures, still open to an evolving development.

The three volumes under review, therefore, approach human learning from three distinct points of view. The first, from a calm historically-grounded and yet sophisticated psychology, provides a non-dogmatic framework in which to set the basic facts of learning. The second shows the continuity of learning with the other biological processes, and by a wealth of exact scientific data contributes to an organization of the physiological psychology of learning. The third book, an essay in theory, presents certain points of view in regard to learning which are not in harmony with those considered as basic in the other two volumes, but a point of view which may itself be of interest and value to those who are undertaking the difficult task of progressively adapting the processes of education to the rapidly changing world of to-day.

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The Pilgrimage of Faith in the World of Modern Thought.
Stephanos Nirmalendu Ghosh Lectures, 1927-28. DOUGLAS
CLYDE MACINTOSH. Calcutta: University of Calcutta. 1931. 299
pp.

Among American theologians, there is none who sets a higher valuation upon general philosophy, or shows himself more competent in the handling of general philosophical questions, than D. C. Macintosh of Yale. Any adequate solution of the problems of re-

ligion is always conceived, in his theology, to include an adequate solution of the problems of epistemology and metaphysics. It was on this account, no doubt, that his metaphysically-minded hosts at the University of Calcutta judged him worthy to lecture to Hindu students upon some theme related to the quest for a universal religion; and for the same reason, students of general philosophy will find in these lectures plenty of grist for their mill.

Professor Macintosh adopts, in fact, as the structural principle of his book the view that universality in religion is to be approached, not so much through syncretism as through a simultaneous process of philosophical self-criticism whereby every great religious tradition will purge itself of its contradictory and irrational elements and arrive, from its own characteristic point of view, at universally valid religious truths which all enlightened men can accept. Taking his stand, then, within the Christian tradition, he describes, as a participant observer, the pilgrimage of modern Christian thought since it emerged from the "Egypt" of traditionalism. The reader who follows him on this pilgrimage finds himself thinking through all the more important philosophical tendencies of the past century.

The earlier chapters, which carry one through the "wilderness" of British empiricism and Kantian agnosticism into the delusive "promised land" of Hegelian idealism, and then back into the "exile" of pragmatism, present a brilliant critical review—logical rather than merely chronological—of the main schools of modern philosophy in their bearing upon the problem of religious belief. The results are mostly negative, although something is salvaged from the wreck of each demolished position. Idealism is expounded and criticized at greatest length, because of the high hopes which religion has pinned upon it, and the damage done to religion by its collapse. A wealth of citations, in footnotes, from philosophers and theologians of each important school of thought, adds greatly to the interest and value of this review.

At Chapter VIII, "Homeward Bound: Representational Pragmatism and Moral Optimism," Professor Macintosh begins the construction of his own system of religious thought. Its corner-stone is a critically revised version of the Kantian method of postulation. Rejecting the tendency of certain pragmatists of the Will-to-Believe type to postulate as "true" whatever seems desirable, Macintosh maintains that it is possible "to deduce some of the principal theoretical propositions of religion, by a process of strictly logical inference, from what can be reasonably regarded as universally valid values" (p. 192). Kant's deduction of moral freedom from moral responsibility was a logical deduction of this sort, thinks Macintosh, but his further deduction of God and Immortality was not strictly

logical. In order to make it logical to postulate God and Immortality, one must further assume that a moral attitude of a definite type—moral optimism, or the trust that one's moral efforts are not running against the grain of the universe—is the most valid moral attitude for the kind of world we find ourselves in. This assumption Macintosh is willing to make, because religious experience shows that the man who makes the "right religious adjustment" finds himself regularly supported by a "Dependable Factor" in the cosmos, which is the God of empirical theology. A realistic theory of knowledge supports the view that the object of this experience is independently real, in exactly the same sense in which objects of sense-perception are real; and one may hope to build up a body of propositions about it so as to constitute at least the beginnings of a genuine *science* of theology. From the boundaries of this science, metaphysical hypotheses may then be thrown out, which must ultimately be squared both with the findings of empirical theology and with the findings of all the other sciences. Macintosh is convinced that the hypothesis of a Conserver of Values, related to human persons much as an organism is related to its cells, or a society to its members, is consonant with all the facts of science and legitimately deducible from the postulate of moral optimism.

Since the death of Josiah Royce, we have had few comprehensive philosophical defenses of religion from American thinkers. If Macintosh lacks Royce's speculative genius, he has at least a sober Scottish sagacity which commands respect.

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The Meaning of Right and Wrong. RICHARD C. CABOT. New York: The Macmillan Company. 1933. Pp. x + 463.

In this book, Dr. Cabot opens up for the layman a generous fund of *Lebensweisheit* which has closer affiliations with Goethe, Shakespeare, and Montaigne than with the professional philosophers (a horrid name). It is his purpose to introduce the reader to ethical reflection and action through a proper analysis of actual life situations. He believes that anyone can, by constant application and controlled technique, improve his ethical behavior until its practice is akin to the artistry of a skilled tennis player or a finished violinist.

To the puzzled contemporary asking the direct and (to the ethical theorist) often embarrassing question: "How can I know whether this given course of action is right or wrong?" Dr. Cabot propounds no *a priori*, categorical imperatives, hedonistic axioms. Nor does he expand upon the principle of self-realization. Rather, he implies by his treatment of the problem that while these are

proper questions in their place, a sense of the fitness of things should prevent anyone from offering the honest seeker this stone when his immediate need is bread. Later on he may need a few stones to build an oven. However, Dr. Cabot does not go to the opposite extreme by giving the unwary an infallible answer or guide. Instead he offers what he calls "a group of well-tried tools of analysis" which the individual can use in his specific situation. These, stated in the form of questions, outline the general argument of the book.

"(a) What agreements have you entered into, tacitly or explicitly with yourself and with others?

"(b) What rival interests or desires are active in the situation wherein you wish to find the right act?

"(c) What are your needs (often quite unlike your desires)?

"(d) In what respects are you apt to be deceiving yourself?"
(p. 13.)

A careful and honest application of these tools will direct the questioner into a course of action commensurate with his capacities and with the demands of the group. While it may appear that the author begins his analysis in legalistic fashion, his actual handling of the issue is both vital and arresting. The chapters which contain perhaps the most food for thought are the two "on growth, which Dr. Cabot calls "the authoritative need," and which requires particular emphasis among the masses of the American public suffering mental and moral atrophy attendant upon a highly mechanized industry. The division of self-deceit into the "palavering" type and the "reckless or anæsthetic" type is suggestive, though Freud is disposed of too easily by the casual remark that facts are against the new psychology when it insists that self-deceit is unconscious (p. 8 note). Surely this is a question of degree. Psychiatrists have uncovered scores of cases in which neuroses were dependent upon childhood experiences stimulating a vague, automatic response rather than a conscious effort to repress the painful conflict. But this does not lessen Dr. Cabot's salutary emphasis which needs attention in an era which has accepted uncritically the most phenomenal cases of abnormal behavior as standard types—patterns applicable to saints and sinners, harlots and virgins, criminals and officers of the law. Surely self-deceit is, in the majority of cases, consciously born and bred, though its pathological results are not foreseen. A denial of this is only a more subtle form of self-deceit.

It will be interesting to see whether Dr. Cabot can make his concept of the "supermoral" stick. By this he indicates the release of the whole personality into heroism, enthusiasm, creation, or discovery. Since a discussion of this issue will degenerate inevitably into

a debate over the use of terms, we may as well leave it for those who relish this sort of thing. The references to business, professional, and international ethical problems is thoughtful, at times illuminating, although one is at a loss to understand why the *New Republic* is represented as a common scold (p. 5). Surely vigorous critics of the *status quo* should receive higher honors than the shrew, unless Dr. Cabot is in deadly earnest and would include editors like William Lloyd Garrison in a similar category. His chapter on Ethical Security and Ethical Reform suggests that his viewpoint is much more liberal than this, however.

Beginning students in ethics can be saved the following discomforts by this genial and serviceable orientation:

(1) Learning all the isms before a single life problem is approached.

(2) The suspicion that after months of study they are practically right where they started.

(3) The misgiving that ethics means discussion without action.

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JOURNALS AND NEW BOOKS

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 40^e Année, No. 4. Introduction à l'étude de la pensée; Déblaiement et sondages: *M. Blondel*. La détermination du fait primitif (premier article): *J. Nogué*. L'astrobiologie et la pensée de l'Asie: Essai sur les origines des sciences et des théories morales (suite): *R. Berthelot*. L'œuvre philosophique de G. Peano: *U. Cassina*. Les premiers rapports de Saint-Simon et d'Auguste Comte: *H. Gouhier*.

Proceedings of the Aristotelian Society, 1932-1933. New Series, Vol. XXXIII. London: Harrison & Sons, Ltd. 1933. 353 pp. 25s.

Wobbermin, Georg: The Nature of Religion. Trans. by Theophil Menzel and D. S. Robinson. With an Introduction by D. C. Macintosh. New York: Thomas Y. Crowell Co. 1933. xvi + 379 pp. \$3.50.

Tufts, James Hayden: America's Social Morality. Dilemmas of the Changing Mores. (American Social Science Series.) New York: Henry Holt & Company. 1933. x + 376 pp. \$2.40.

NOTES AND NEWS

We regret to announce the death on November 25 of Durant Drake, Professor of Philosophy at Vassar College.

Professor Drake was born at Hartford, Conn., December 18, 1878. He received the A.B. degree from Harvard University in 1900, the A.M. degree in 1902, and the Ph.D. degree from Columbia University in 1911. He was an instructor in philosophy at the University of Illinois, 1911-1912; associate professor of ethics and philosophy of religion at Wesleyan University, 1912-1915; professor of philosophy and education at Vassar College since 1915. He lectured in some of the German, Swiss, and Italian universities, 1923-1924.

His published works include *The Problem of Things in Themselves*, 1911; *Problems of Conduct*, 1915; *Problems of Religion*, 1916; *Shall We Stand by the Church?*, 1920; contributor to *Essays in Critical Realism*, 1921; *America Faces the Future*, 1922; *Mind and its Place in Nature*, 1925; *The New Morality*, 1928; *Invitation to Philosophy*, 1933.

We welcome the first number of a new philosophical quarterly, entitled *Philosophy of Science*. It is the "chief external expression" of the Philosophy of Science Association and its editorial board is composed of the following members: William Marias Malisoff, editor; Eric T. Bell, Albert E. Blumberg, Rudolf Carnap, Morris R. Cohen, W. W. Cook, Herbert Feigl, K. S. Lashley, Henry Margenau, H. J. Muller, L. Susan Stebbing, Dirk J. Struik, Alexander Weinstein.

The first number contains the following articles: Editorial, What is Philosophy of Science? On the Character of Philosophic Problems by Rudolf Carnap; The Logical Character of the Principle of Induction by Herbert Feigl; Finite or Infinite by E. T. Bell; On the Foundations of the Theory of Probabilities by D. J. Struik; An Examination of the Quantum Theories by William M. Malisoff; Quantum Mechanics as a Basis for Philosophy by J. B. S. Haldane; Indeterminism and Natural Selection by R. A. Fisher; Discussion (Correspondence); Reviews and Notes; A New Budget of Paradoxes; Notices.

Philosophy of Science will appear quarterly, the first number being dated January, 1934. The membership annual dues of \$5.00 per year include subscription to *Philosophy of Science*. Communications and correspondence relating to editorial matters should be addressed to the editor, William Marias Malisoff, 128 South 49th Street, Philadelphia, Pa. Correspondence relating to subscriptions, remittances, and business matters should be addressed to the publishers, The Williams & Wilkins Company, Mt. Royal and Guilford Avenues, Baltimore, Md.

THE JOURNAL OF PHILOSOPHY

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Volume XXX. No. 19. September 14, 1933.

Recent Developments in Indian Thought. JAMES BISSETT PRATT.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 20. September 28, 1933.

A Frequency Theory of Probability. ERNEST NAGEL.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 21. October 12, 1933.

Naturalism and Agnosticism in Santayana.

STERLING P. LAMPRECHT.

Report of the Chicago Meeting of the American Philosophical Association. HAROLD A. LARRABEE.

Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 22. October 26, 1933.

Dualism and the Paradox of Reference. ARTHUR O. LOVEJOY.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 23. November 9, 1933.

The Innocence of the Given. DONALD C. WILLIAMS.
Book Reviews. Journals and New Books. Notes and News.

Volume XXX. No. 24. November 23, 1933.

Studies in the Structure of Systems. KARL SCHMIDT.
Is Idealism Incurably Ambiguous? F. C. S. SCHILLER.
Book Reviews. Journals and New Books. Notes and News.

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By G. Watts Cunningham, Professor of Philosophy,
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THE JOURNAL OF PHILOSOPHY

THE LOGIC OF MEASUREMENT

IT is perhaps not strange that most of the problems in the philosophy of science have been discovered by philosophers rather than by scientists. Perspective is not gained from within. Immersion in the details of collecting, arranging, and organizing data, formulating hypotheses and checking and rechecking by experiment, are not conducive to the attainment of a broad vision of the scientific method as a whole. To be concerned with the manipulation of numbers does not lead one readily to ask questions as to the ultimate nature of number. When LaPlace wrote his book on the theory of the heavens he did not need the hypothesis of God. The scientist is too much concerned with getting somewhere to stop and ask how he gets there.

All this is, of course, rightly so. But it has most important consequences. For there arises necessarily a large group of problems which, so to speak, know not where to lay their heads. They are not scientific for they are no concern of the scientist; yet they are not philosophical, for their content is essentially scientific. Who, then, is to be the final arbiter in case dispute arises as to the legitimacy of such problems? Is it to be the scientist who will probably fail to see their philosophical bearing, or the philosopher who will probably misconstrue their scientific significance? One is reminded of Poincaré's remark *à propos* the law of error: "All the world believes it firmly because the mathematicians imagine that it is a fact of observation, and the observers that it is a theorem of mathematics."

For this reason I am somewhat hesitant about suggesting my problem, for I am not sure that it is a problem. Both the scientists and the philosophers may legitimately disclaim any responsibility for its solution. Yet I venture to suggest with appropriate modesty that it is not just pure nonsense.

Put as simply as possible, the problem is this: Why measure? More explicitly: What is the informative value of measurement? What does the process of attaching a number to a quality tell us about its character? What is the logical value of the reduction of quality to quantity?

In the first place, let me insist that I am not in any sense calling into question the legitimacy of measurement. This would indeed

be an inopportune moment in the history of science even to hint at the ineffectiveness of measurement. It would seem, rather, that with the adoption of quantitative methods science is at last really coming to its own. Many would insist that when man first began to measure, science was born. Whitehead bemans the fact that measurement was so late in appearing in the history of science. "The practical counsel to be derived from Pythagoras," he remarks in his *Science and the Modern World*, "is to measure, and thus to express quality in terms of numerically determined quantity. . . . If only the schoolmen had measured instead of classifying, how much they might have learnt!"¹ "The predominance of physics is due," says Norman Campbell, "to its consistent determination to introduce measurement into its discussions at the very earliest stage."²

In the second place, let me de-limit my field to exclude all technological questions. This will enable me to avoid all of the problems which have to do with the actual manipulatory activities involved in measurement. To exclude such problems from consideration is not to deny their reality. It is rather to acknowledge that their importance is too great to warrant the superficial treatment which I shall give the problem. Bridgman has well emphasized the importance of these questions when he suggests that in a certain sense the very meaning of the term "measurement" is dependent upon what we happen to be measuring.

With these two significant limitations, then, let me turn to my problem. Why measure? The solution which has been heard most commonly in recent years is somewhat as follows. We measure because quantitative concepts give us an insight into the character of the world which could not possibly be gained by purely qualitative notions. Quantity is, in fact, fundamentally more rational than quality. Qualities are given as stubborn, brute facts, to be felt or experienced, but not to be comprehended in their given character. A quality is not understood until it is measured. If it can be measured directly, the result can be achieved immediately; if it can not be measured directly, it must be measured indirectly by correlation with a quality which can be measured; if there is no such quality, then recourse must be had to a hypothetical or fictional entity, itself quantitatively and supposedly in direct variation with the given quality. Laws, furthermore, which express correlations between two qualities, are not properly laws at all until the qualitative correlations have been replaced by functional relationships of a mathematical kind. Quantity is the key which unlocks reality.

¹ P. 41.

² *Physics, the Elements*, p. 33.

Now as a methodological postulate this can hardly be criticized. But as is often the case in science, a methodological postulate is given the status of a metaphysical judgment. The quantitative aspects of the world are soon looked upon as representative of its essential nature. To explain qualities is to explain them away. To understand them is to be convinced that they are mere appearances. To rationalize them is to construct a system in which they do not function at all as genuine elements. To talk about them is to talk about them vicariously. To grasp them is to realize that they can not be grasped.

This metaphysical conclusion may or may not follow from the above postulate; with its truth or its relationship to that postulate I shall not be concerned. But should we be able to cast doubt upon the validity of the postulate, we should also to that extent undermine the derivative metaphysical position.

Let me state in the clearest manner possible the truth which is contained in this postulate. By the correlation of quantities with qualities, the qualitative system is replaced by a quantitative system whose integrative possibilities are much greater than those of the qualitative system and which, accordingly, contributes to that qualitative system a high degree of rationality. This is based upon the commonly recognized fact that whereas every quantitative relation presupposes a qualitative relation, many qualitative relations represent, so to speak, a whole sheaf of quantitative relations. The logical relations between two qualitative concepts are based either upon the mere presence or absence of the qualities in an occurrent, or a class of occurrents, or upon the resemblance or difference obtaining between the concepts. As soon as quantity is introduced, presence and absence become replaced by degree of presence and degree of absence, i.e., by degree of intensive manifestation, and resemblance and difference become replaced by degree of resemblance and degree of difference. Now the introduction of numbers involves the admission into the system of qualities of a relation not possessed in general by qualities, a relation which permits one element of the system to be derived from another element of the system by an operation. Hence when qualities are represented by measured values, the qualities take on with relation to one another the relations of the respective measured values. Thus the qualities become derivable from one another by operations. This gives the correlations of existence much less of the character of brute facts, for it is now possible to see in a sense why they are as they are. The relation of species to genus and of species to coördinate species becomes interpretable in terms of the relation of value to variable and of one value to another. For example, the qualitative relations between, say, red,

green, and blue, and between any one of these and the abstract notion of color, are, as purely qualitative relations, somewhat in the nature of surds whose reality we must recognize, but whose character we can not penetrate. One may say in a vague sort of way that the shades differ from one another in that each possesses the same indefinite relation to the abstract notion of color. When quantitative values representing wave lengths are employed to designate the shades, the nature of the difference between the shades is seen to be of the same kind as that between two numbers, and the nature of the relation of any shade to the abstract notion of color is seen to be of the same kind as that between any number, as a value, and number in general as a variable. Furthermore, and this, after all, constitutes the essential advantage of a quantitative system over a qualitative one, the relational possibilities of the qualitative system are enormously increased by virtue of the extension of the number system to include zero values, negative values, and infinite values, to mention only a few. It then becomes possible to recognize qualitative relations not previously known to obtain. For example, a circle and a polygon may be shown to resemble one another by virtue of the fact that the circle may be derived from the polygon through the increase to infinity of the number of the sides. So in the same way a straight line may be shown to be a curved line of zero curvature, parallel lines may be shown to be lines which meet at infinity, etc. Thus in general the introduction of quantitative methods permits the substitution of relations of quantitative dependence for relations of qualitative independence or of loose qualitative dependence, and of specific quantitative dependence for relations of general qualitative dependence. Accordingly, a high degree of systematization and integration replaces a low degree, and the aims of rationality are to that extent achieved.

Such, I think, is the essential content of the postulate, and I hardly see how one could disagree with it. But there is commonly claimed for the postulate more than is thus revealed upon the surface. For this reason I wish to examine it further. I shall attempt to point out two limitations which must be put upon the interpretation, in order to determine more precisely its explanatory value and to prevent certain unjustifiable metaphysical implications from being drawn. These limitations have to do, in the first place, with the claim that quantity is logically more basic than quality, and, in the second place, with the claim that a quantitative system can in any sense be representative of a qualitative system.

With regard to the first claim, that quantity is logically more basic than quality, there are several considerations. In the first place, what is one to mean by the phrase "logically more basic"?

In the system of *Principia Mathematica* quantitative notions are introduced late in the derivation; qualitative notions are presumably logically more basic because they constitute the content of the more elementary theorems. Thus by "logically more basic" one can not mean "nearer in a deductive system to the primitive propositions." Nor can one mean by the phrase, "more abstract." This would presume that quantity is more general than quality and that quality is definable as a species of quantity possessing a certain differentiating property. The fact seems to be that the reverse is true. Quantity is less abstract than quality because it is a species of quality whose differentiating property may be pointed out. Thus there are quantitative and non-quantitative qualities. Whenever the species of a quality may be arranged into a series by virtue of an asymmetrical, transitive, connected relation which is capable of being interpreted as "greater than," this quality may also be spoken of as a quantity. Thus a quality is also a quantity when certain conditions, which may be specified, are fulfilled. All quantities are qualities, but not all qualities are quantities.

But, in the second place, there is the much more obvious fact that every quantity is a quantity of something. Quantities are not mere numbers but lengths, areas, volumes, durations, velocities, masses, etc. The representation of quantities by numbers tends to obscure this fact, for in the numerical representation we often lose sight of the fact that, after all, there is a unit involved, and that it is the qualitative character of this unit which makes our measurement truly representative. Thus when we attach a number to a length we do not dispose of the length once for all by replacing it by a number; we substitute for it a numbered length, and the problem remains. The same situation prevails, though in a slightly different manner, in those cases where we do not measure directly. To measure the quantity of heat by the length of a column of mercury is not to reduce quality to quantity, but merely to substitute for a quality to which numbers can not be readily attached another quality to which they can. The "reduction" of heat to molecular motion is, in principle, the same; for motion is still a quality, i.e., something qualitatively distinct from, say, angular spread.

In the third place one may go even further. For is not number, which is presumably the most quantitative of all quantities, itself a quality? That it is always a property of a class rather than of a single object gives it no character of uniqueness, for there are many such properties which would be characterized as qualitative, e.g., the properties of being unified or disunified, systematic or unsystematic, ordered or unordered. The fact seems to be that number is one of the given properties of things just as color and sound.

Certainly that which distinguishes number from color and sound can not itself be a quantitative factor. May not one insist also that that which distinguishes twoness from threeness, although it is a quantitative factor, can not be purely such? Numbers lend themselves so readily to serial arrangement that we are inclined to lose sight of their purely qualitative character. It seems clear on inspection that twoness, threeness, fiveness are basically qualitatively distinct species of the genus number, distinguishable from one another in the same sort of way that red and green, or bitter and sour are distinguishable.

The objection which one is tempted to make at this point is something like the following: But do we not institute measurement precisely in order that the mysterious relationship between red and green may be made intelligible by substituting for each of them a number representing its wave length, and thus showing that the relation between red and green is the same as that between two numbers, and that the relation between red and green, respectively, and the general notion of color is the same as that between two specific values of a variable and the variable itself?

Such an objection begs the very question at issue. Since the relation of two numbers to one another is simply the relation of one of two coördinate species to the other, and since the relation of any value of a variable to that variable is merely an instance of the species-genus relationship, it is hard to see why talking in terms of numbers helps us to understand colors. We simply have two qualitative systems which are structurally similar; if a relation in one system is mysterious, it will be equally so in the other. Apart entirely from ordering relationship, it seems that the qualitative difference between twoness and threeness is just as ultimate and inexplicable as the qualitative relation between redness and greenness, and although we *seem* to be able to derive twoness and threeness from number in general as a matrix, we are actually able to do this with no more success than we are able to derive redness and greenness from color.

The second general claim of the postulate of measurement is that quantity is a true representative or indication of quality, i.e., that in the act of measuring a range of qualities there is constructed a quantitative substitute for it, which substitute so accurately represents the original as to make unnecessary any further reference to it.

While agreeing, as before, with the substantial character of this claim, I feel an urgent need to suggest certain limitations which should be put upon its interpretation. The first is a word of caution with regard to the substitutional character of these systems. It

must be remembered that the resemblance of the quantitative system to the qualitative system is one merely of a structural character of the most general sort. Thus one can not be sure that any specific relation of the quantitative system is going to possess a counterpart in the qualitative system. In other words if we suppose that we can do everything with qualities which we can do with their measured values we are going to get into all sorts of absurdities, such as supposing that colors may be multiplied together, or tastes divided by one another. It is true that the analysis of the quantitative system frequently suggests valuable hypotheses to be tested with reference to the qualitative system, but these must be considered as mere hypotheses and subjected to the usual tests.

The second limitation is a reminder that however great may be the structural similarity of the two systems, in general as we pass from the qualitative system to the quantitative system we lose the essential *quale* of the quality measured. Where the measurement is of a very direct sort this need not be true, provided we do not lose sight of the unit. But in the less direct sorts of measurement, where we correlate colors with wave lengths, and tones with vibrations, and heat with columns of mercury, it is clearly absurd to suppose that the measured value in any sense replaces the quality measured. When qualities are measured they are not explained away. There is thus no reason to suppose that the reduction of heat to quantitative terms makes it unreal or subjective or in any way removes it from the realm of empirically given entities. Quality, apparently, is closer to sentiency, just as quantity is closer to rationality. But there seems to be no reason why sentiency should be absorbed in rationality.

The third limitation is the general incapacity of a quantitative system to represent dichotomous divisions, i.e., to handle two-valued systems. Where qualities manifest themselves not by degree but by complete presence or complete absence, there can be no quantitative representation. Thus it is impossible to show quantitatively how two qualities can be at the same time similar because species of the same genus and yet contradictory because implying contradictory differentia. Bogoslovsky's attempt to explain qualitative differences in terms of a principle of quantitative indices applies to divisions which are only *apparently* dichotomous and is utterly futile when forced upon genuine dichotomous divisions.

In the fourth place one must insist that measurement is in many cases an affair of so artificial a character, that one is presuming a great deal to suppose that a knowledge of the quantitative system conveys any essential information with regard to the qualitative system. Many qualities may be ordered as intensive quantities, and

then more or less arbitrarily correlated with the system of ordinal numbers. As a result the system of qualities may be supposed to take on the relationships of the ordinal numbers. One of the best examples of this sort of thing is the measurement of hardness upon the basis of the asymmetric, transitive, connected relation "scratches." When the serial arrangement has been completed, one member of the series is chosen in a completely arbitrary manner as the standard of hardness, and the correlation of the ordinal numbers begins at this point. It is easily seen that the numbers represent the qualities not inherently but only in the sense that they locate the qualities in a graded series of similar qualities. Thus the informational value of such a representation is dependent upon the choice of a standard of value, the compactness of the series, the regularity of the intervals between adjacent members, and the terminating members of the series. And in any case the only structural relations which may be transferred from the system of quantities to the system of qualities are the ordinal relations. These are definitely more limited in scope than the cardinal relations. This sort of measurement is coming into vogue more and more in recent years in extra-scientific fields. One can not order potatoes in a produce market without being asked whether one wants grade A, B, or C; nor can one buy a can of peas without deciding whether to take grade 3 or grade 4.

In the fifth place, and this limitation seems to me to go right to the heart of the matter, the more highly integrative character of a quantitative system is brought about in many cases only through the introduction into that system of complex, non-descriptive, fictional concepts or constructs. Such notions have clearly lost touch with reality; thus their representative character has been sacrificed to their integrative character, and though their insertion in a conceptual system contributes to the rationality of that system, the sense in which the system may be said to be "about" reality becomes more and more strained as their number increases. The best examples of this sort of thing are found in mathematics, though the same tendencies are found in all sciences which are beginning to take on a highly integrative character. One of the most common of the fictional activities is approximately as follows. Given a quality which is subject to a quantitative variation within certain empirically determined limits, suppose the quality to take on a value outside of these limits; what propositions may then be asserted about it? It is clear that no existential propositions can be asserted with reference to it, and it is equally obvious that all characterizing propositions will be conjectural because based on loose analogies and unproved assumptions of continuity. This is the status of perfect

levers, and ideal gases, of mathematical points, lines, and planes, of completely isolated human beings, perfect human beings, of the various utopias and perfect economic cities, etc. Such notions can hardly be spoken of as descriptive in any commonly accepted meaning of the term; thus one may say that with the introduction of quantitative methods reality as experienced is being essentially lost sight of. To be sure, this is only half of the story. For with the loss in descriptive character there is an immense gain in the integrative character of the knowledge. With the increase in ideal notions comes also a decrease in gaps in the total body of propositions constituting the science; independent elements are related by the insertion of ideal members participating in the characters of both; in many cases actual members of the system are shown to be identifiable with ideal extensions of other members as in the definition of a circle as a polygon of an infinite number of sides; relations of independence between propositions become replaced by relations of compatibility, and relations of compatibility by relations of implication. The result is a system of highly integrated elements, eminently satisfactory so far as our rational demands are concerned, but lacking in the single descriptive character which was the virtue of the original qualitative concepts. Thus we have here a factor which imposes an essential limitation upon the interpretation of the proposition that in measurement we construct a quantitative substitute for a qualitative system. The quantitative system is not only more highly integrated than the qualitative one, but it is made up essentially of idealized and simplified counterparts which can not in the nature of the case adequately represent the simple qualities.

One might easily prolong the argument, but I stop with the mere enumeration of certain further limitations, such as our inability to solve mathematical problems beyond a certain degree of complexity so that the mathematization of qualities may involve only a pseudo rationality. Again there are all of the difficulties associated with measurements as they are actually carried on, the fact of the fluctuation of values so that we are compelled to be satisfied with averages, means, modes, etc., the fact that all measurement rests ultimately upon a judgment of sense either in the reading of the recording instruments or in the construction of the recording instruments in the first place, etc., etc.

My thesis has, I hope, been made clear. I have not tried to deny the adequacy or the efficacy of measurement either upon theoretical or upon practical grounds. I have tried to show, rather, that when we do measure we must not claim for our results more than is justified by the actual character of the measurement process. More

specifically we must not suppose either that we have gotten rid of quality or that we have constructed a genuinely representative image of quality.

A. CORNELIUS BENJAMIN.

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WHITEHEAD'S CONCEPT OF PROCESS: A FEW CRITICAL REMARKS¹

1. Whitehead's philosophy of organism is built on the assumption that the most significant feature about the world's cosmology is the fact of becoming. There is not a corner in the universe, where it does not take place; nor is there a day, when it rests. Wherever it is, there is life, experience, change, action. Behind it lies the cinder of events that no longer happen; in front—there is nothing yet. Indeed, in becoming, events generate their offspring, the present. Its contents are not fixed, but stride over dates: for becoming is not time, but produces time. The distinction among the past, present, and future should not, therefore, be regarded as intrinsic to time, but rather as descriptive of incidental relationship between facts and the process. The truth is that the present of this series is not identical with becoming, but only with the contents of becoming: as they change, the present changes, too. It seems to follow that process is prior to time (as well as to space) and that extension constitutes the potential order in which becoming performs its creative advance into novelty. Indeed, in asking the question "whether time is to be found in nature or nature is to be found in time" (CN, 65), Whitehead definitely chooses the former alternative. "Genetic passage from phase to phase is not," he says, "in physical time: the exactly converse point of view expresses the relationship of concrescence to physical time. It can be put shortly by saying, that physical time expresses some features of the growth, but *not* the growth of the features" (PR, 434). Whitehead thus joins Leibniz, in the latter's opposition to Newton's "receptacle" doctrine of time and space, according to whom "bits of space and time were conceived as being as actual as anything else, and as being 'occupied' by other actualities which were bits of matter" (PR, 109).

2. It seems to me that, in having accepted the logical priority of

¹ I shall use the following abbreviations for the titles of A. N. Whitehead's works: *E* for *An Inquiry Concerning the Principles of Natural Knowledge* (1919); *CN* for *The Concept of Nature* (1920); *R* for *The Principle of Relativity* (1922); *PR* for *Process and Reality* (1929); *A* for *Adventures of Ideas* (1933).

process to space-time, Whitehead chose a precarious intellectual enterprise. As another of our contemporaries recently remarked,² "the word 'potentially' is a dangerous one in philosophy. It has often been used to disguise or evade the problem of change, which is not an easy one." Now, we should not forget that in the spiritualistic pluralism of Leibniz the "order of succession" and the "order of coexistence" were essentially ideal orders; and that objects and events were data of subjective experience for which perceptual space and time served as the fields of potential existence. But, whereas the monads of the German thinker, having no "windows," did not interact but spontaneously changed following the principle of pre-established harmony, the events of Whitehead are situated in extension, a physical and real spatio-temporal order, which largely determines the form and results of their interaction. The difference in these two positions is quite important, piling upon the Cambridge-Harvard thinker considerably greater difficulties in his exposition of the doctrine of potential extension than Leibniz ever had to face. To be sure, it is perfectly natural for human beings to limit actuality to the data of perceptual and emotional experience, that is to say, to everything that lies within the shifting boundaries of the advancing present. But it is no less natural to believe also that space falls within these boundaries and that, consequently, it should be identified with the field of the actual rather than with that of the potential. However, a thinker of our days finds himself in a quandary in this respect. His memory is still ringing with the news concerning that great intellectual revolution which was achieved in reorganizing our conceptual world through the special theory of relativity. He well understands that in deciding to regard space as actual and time, with the exception of the present moment, as potential he commits himself to a serious departure from the gains which the notion of space-time yielded to us, or perhaps even to a return to no longer tenable doctrines of the nineteenth century. Whitehead, himself an important contributor to the theory of relativity, concedes that all four physical dimensions are essentially similar and, in fact, starts building his philosophical system with postulating the notion of the quadridimensional event-particle. He is thus forced to regard extension, and also time and space, as abstractions from it, either as potential in every respect or as actual, before, now, and afterward. He chose, as we know, the former alternative. Yet the undertaking to bring his ideas into coherence under these conditions seems to have been so great that he manifests certain embarrassment in denying the actuality of present space.

² Inge, W. R., *Outspoken Essays* (Second Series), 9.

3. Let us, then, try to comprehend the nature of Whitehead's difficulty. First of all, what exactly does he understand by the term "actual"? Negatively, it is that which is "divested of all possibility" (*E*, 61); positively, "it is what does become in nature" (*ibid.*). In his interpretation, extension, on the whole, does not satisfy these conditions. Indeed, it can not be actual, for, as Whitehead clearly points out, extension is continuous, whereas "actuality is incurably atomic" (*PR*, 95). Even durations, which are present slabs of extension, possess no atomic structure (*CN*, 59) and extend over neighboring durations, thus having no maximum or minimum measurement. What, in fact, can be less ambiguous than a statement to the effect that the extensive continuum "is in itself the potentiality for division" and that "an actual entity effects the division" (*PR*, 104)? But the solution of our problem is not quite so simple. We recall, indeed, that Whitehead himself describes a duration as a complete and inclusive event (*CN*, 186), not making it sufficiently clear in what respect and when a duration partakes of the qualities of event, which is atomic, and of the qualities of extension, which is continuous. Similarly, time is conceived as continuous as well as atomic. It seems that, in regard to the past-present-future series, time is continuous, potential, and absolute; but, in regard to the process of becoming, it is epochal, actual, and relative to subjective experience,—taking the form of time-quanta and accounting for the newly discovered indefiniteness in the notion of the simultaneity of events. This ambiguity of concepts is quite confusing, especially when, consulting one of his earlier books, we discover a statement, written perhaps during one of the moments of uncertainty and hesitation, that "time and space, which are entirely actual and devoid of any tincture of possibility, are to be sought for among the relations of events" (*E*, 62). If I misinterpret Mr. Whitehead, let him correct me and throw some much-needed light on the problem, for the obscurity of which he is, no doubt, partly responsible. But it seems to me that his philosophy, as it stands today, brings us, in some respects at least, back to the days of Newton, since it creates, on the one hand, the doctrine of absolute (potential) space-time (extension) and, on the other hand, the doctrine of relative (actual) space and time, the latter being "simply expressions for a certain observed ordering of events" (*R*, 71).

4. Something like a compromise is reached in creating the distinction between "mere" (or "general") and "real" potentiality (*PR*, 123 f.). By the former Whitehead understands "the bundle of possibilities, mutually consistent or alternative, provided by the multiplicity of eternal objects" (*PR*, 102). The latter is consti-

tuted by the physical world, the spatio-temporal field in particular, and is called "real" because of its inherent creativity, and "potential" because of its passive capacity (*A*, 230). Yet I am afraid that the distinction is largely verbal and by no means clarifying. One can comprehend, of course, that the same physical world is actual, in so far as it creates, and potential, in so far as it contains, that which is about to be actualized. But one wonders whether Whitehead seriously means to ascribe inherent creativity and, consequently, real potentiality to the system of spatio-temporal relations called by him extension. The whole thing is egregiously confusing and defies the best effort at comprehension on the part of a reader; and when he, moreover, hears that "the extensive continuum is real, because it expresses a fact from the actual world and concerning the contemporary actual world" (*PR*, 103) and recalls that, in another connection, even the future was called real, obviously on some different grounds yet apparently in the same sense, he is completely bewildered.

5. Furthermore, what is the reason that Whitehead, who seems to endow the "real" potentiality of space with creativity, without adequately discussing the implications of such an assumption, does not consider the other alternative which his initial position suggested, namely, that everything that becomes is actual, whether it be classed as relatum (event) or as relation? In this respect, he, following a long but doubtful tradition, assumes that only relata undergo transformation in becoming. Yet the assumption is questionable if not false. The truth, as I see it, is, first, that no relatum can change without thereby modifying existing relations, and also that no relation can change without thereby modifying existing relata. The dependence of events and relations is mutual and demonstrates their inseparability rather than causal interaction; consequently, both types of existential elements partake equally of becoming. Second, it seems to me that it is a mere prejudice, inherited from old natural philosophy, to believe that the same self-identical space persists through successive moments of time; the physics of four dimensions implies, in fact, that spaces are superseded in process no less than are events. Instead of speaking only of time-quanta, Whitehead should have spoken of space-time-quanta. Third, as soon as we clearly comprehend that space can not undergo change apart from the events bound with it and that it passes with time, just as time passes with space, we arrive at the conclusion that there is no more potentiality for division in the system of spatial relations than there is potentiality for transformation in events. Thus, the problem of process will remain obscure until we carefully examine the distinction between the actuality of events and the

actuality of relations. I do not know to what extent this suggestion of mine entails a revision of Whitehead's philosophy of organism, or in what measure my criticism invalidates it. What I know, is that he made a brave effort to get insight into most profound aspects of the physical and mental world and to integrate his conclusions into a wide and coherent system. It was, however, in the presentation of his philosophy, complicated by a notoriously difficult terminology, that Whitehead failed, making his books the despair of many a curious and serious scholar.

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BOOK REVIEWS

Vers le Concret: Études d'Histoire de la Philosophie Contemporaine.

JEAN WAHL. Paris: J. Vrin. 1932. Pp. 269.

Vers le Concret brings together three previously published studies, slightly changed, and unified by a preface: "William James d'après sa correspondance," "La philosophie spéculative de Whitehead" (respectively in the 1922 and 1931 volumes of the *Revue Philosophique*), and "Le Journal métaphysique de Gabriel Marcel" (*Revue de Métaphysique et de Morale*, 1930). The resulting book has, however, nothing of the quality of a collection; it gives, rather, a cross section of certain aspects of contemporary empiricism through a sympathetic but discerning presentation of the views of an American, an English, and a French thinker of diverse backgrounds: James as psychologist, Whitehead as philosopher of the exact sciences, Marcel as dramatist. The studies are ably executed: well written, penetrating, clearly organized, nourished by abundant quotations, and projected against a wide knowledge of past and present thought. Excellent as introductions, the studies could hardly fail to be suggestive to any reader. Thankful for much, one might perhaps wish that Wahl had added a companion study on some German figure, such as Scheler or Heidegger.

Wahl discerns a deep and wide movement toward the concrete along all fronts of contemporary thought, and his juxtaposition of the three figures treated allows certain of the characteristics of this movement to stand out, characteristics which he finds in varying degrees in Alexander, Heidegger, Husserl, Scheler, Hönigswald, Bauch, Kierkegaard, Hartmann, and Bergson, as well as in James, Whitehead, and Marcel. Among points in common to the three thinkers treated the following may be mentioned: the insistence upon the immediate, the given, the concrete, and so upon intuition in the root sense of the word, and upon philosophy as description; the

realization of the structural, the voluminous, the slab-like characters of the immediate; a strong sense of the self as given in a world of things (the *In der Welt sein* of Heidegger) with which it is in sympathetic give and take; man is put *in toto* nature, but nature is reinterpreted in a way much more worth being put into; the bringing into prominence of the categories of feeling, giving consciousness a secondary and derivative place; a sympathetic interpretation of science as an instrument of analysis, but a denial of any materialistic or deterministic implications, or that reality can be exhausted by intellect; a frequent appeal to a mystical supra-intellectualistic absorption in reality, a romantic delight in the richness of the world, and its dangerous and adventuresome qualities; the general recognition of social and organismic categories instead of narrowly individualistic and atomistic ones; a firm appreciation, nevertheless, of the stubborn and insistent pluralistic character of actuality; a strong sense of the body, and so of the significance of biological and psychological concepts, and consequently of development and time; a feeling for the concrete that is more than phenomenalistic, since it includes a strong religious and metaphysical sense and demand; a flair for the openness and novelty of the universe, and of the significance of choice and freedom; an interest not only in the opulence of nature, but in a vital intellectual life, as opposed to what Whitehead has called the celibacy of the intellect; a wide tolerance for diversity of systems, and a deep sensitivity to a multiplicity of influences; and in general a tendency to regard as polar, concepts which had come to function as contradictories: monism and pluralism, continuity and discontinuity, receptivity and creativity, immanence and transcendence, internality and externality of relations, organic and inorganic, mechanism and teleology, Being and Becoming, permanence and novelty, universal and particular, past and future, private and public, subjective and objective, individual and society, positivism and metaphysics, realism and idealism. It would be practically necessary to use both members of these sets of terms to describe Whitehead's philosophy, and to a less degree the same is true for James's.

One gets from the very richness of this wing of the new empiricism a feeling that it is the counterpart of esthetic impressionism. There is also evident something of the rapturous enthusiasm for an endless world opened to the gaze that is highly reminiscent of Bruno, and a good case could be made out for the view that the movement Wahl is tracing has taken up anew the philosophically abortive insight of the fifteenth century which had been shortly buried in the remnants of a scholasticism that had, in Whitehead's terms, led to the assimilation of the "matter" of the new science

with the substratum of the Aristotelian-scholastic tradition. But just as the medieval world was not to be conquered so easily in the fifteenth century, so, too, it would seem that the Brunos of the contemporary world have carried in themselves motives foreign to empiricism, and have taken advantage of the breakdown of older dichotomies to find everywhere everything that is prized. There is a consequent mixing of description and self-confession; a carelessness about methodological considerations; a religio-metaphysical type of construction that is never adequately joined on to the presumed positivism; a blurring of distinctions where the distinctions are not wanted. The fact that the spectrum is in one sense a continuum does not negate the other fact that concepts applicable to one part of the spectrum are not applicable to others. As Wahl says of Whitehead, "perception becomes so natural that all of nature becomes perception," and this sort of conversion does not ring true to one type of empirical mind. It is significant that Wahl does not mention the logical positivists, or pragmatists of the type of Dewey and Mead. If the empiricism sampled in this volume may be said to be tender-minded and to have its natural affiliations with idealism, the companion tendencies of logical positivism and critical pragmatism represent the tough-minded wing of empiricism, with natural affiliations to a realistic attitude and cosmology, in so far as these can themselves be grounded meaningfully on a positivistic basis.

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Sinn und Unsinn. WALTER BLUMENFELD. München: Verlag von Ernst Reinhardt. 1933. 110 pp.

The German word "*Sinn*," like its English correlatives, "sense" and "meaning," is used in different ways. On this basis the author of *Sinn und Unsinn* distinguishes five types of meaning. These are: (1) Semantic meaning (*der semantische Sinn*); (2) Telic meaning (*der Zwecksinn*); (3) Formal meaning (*der Gestaltsinn*); (4) Logical meaning (*der Begründungssinn*); and (5) Psychological meaning (*der motivationssinn*).

Meaning of the semantic type consists essentially in a not further analyzable relation between a symbol and the object which it symbolizes. This relation is obviously nonsymmetrical and nontransitive. For, if one of two entities is a symbol of the other, it does not follow that this other is a symbol of the one; and, if the former of these is a symbol of the latter and the latter a symbol of a third entity, it does not follow that the first named is a symbol of the third. We observe also that in different languages, and even within the same language, there are many symbols for the same object. Thus, seman-

tic meaning is characterized by the property of translatability (*Übersetzbarkeit*).

There is a sense in which semantic meaning is objective. That is to say, the relation between a symbol and that which it symbolizes is independent of any particular apprehension. Yet it is also true that symbols are deliberately employed to convey meaning, to produce a definite activity on the part of another person. There is usually one who "gives" the symbol and another who "receives" it. Thus we are led to our second concept of meaningfulness, the telic or purposive. This is not a relation between a symbol and its object, but between two events or processes, one of which takes place for the sake of the other. The telic relation resembles the semantic in being nonsymmetrical; since if *A* is a means for the achievement of *B*, it does not follow that *B* is a means for the achievement of *A*. Telic meaning is also characterized by the property of non-exclusiveness (*Nichtausschliesslichkeit*); that is, there may be more than one means for the achievement of the same end. Telic meaning, however, does not have the property of translatability. A further point of difference between telic and semantic meaning is that the former is transitive; if *A* is a means to *B*, and *B* is a means to *C*, *A* must be a means to *C*.

With the same technical thoroughness, enlivened by occasional excursions into biology, history, metaphysics, religion, and the philosophy of art, the author proceeds to analyze his third, fourth, and fifth types of meaning. These depend, respectively, upon the relation of a part to its whole, of an assertion to its ground, and of an action to the motives which produce it. On page 67, the points of resemblance and difference of the five types of meaning are exhibited in convenient tabular form. It is thus proved beyond question that the innocent word "meaning" is itself a word of many meanings. One consequence of this fact is that it is extremely hazardous to pronounce anything meaningless or nonsensical; for what is devoid of meaning in one sense of the term may nevertheless possess meaning in some other sense. The moral would seem to be that we should agree to restrict the English word "meaning"—whatever may be done in the case of the German *Sinn*—to the semantic use, or if this is not possible, to the semantic and telic uses.

RAY H. DOTTERER.

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Mencius. Translated by LEONARD E. LYALL. London & New York: Longmans, Green & Co. 1932. xvi + 277.

Mencius was a mind of about the same ability as the Stoic Cleanthes or Epictetus. In China, however, there was no Plàto or

Aristotle to overshadow the Confucian school, so that Mencius is of the first importance for Chinese philosophy. His sayings have moreover been carefully preserved and are eagerly studied in China today, whereas the writings of Cleanthes have been mostly lost. The appearance of a new and better English translation of this ancient Chinese philosopher is therefore an important event to everyone interested in the world's philosophies.

Mencius, next to Confucius and Hsüntze, was the most important figure in the development of what came to be the reigning philosophy of China; his democratic tendencies have made him even more popular in republican China today than the aristocratic Confucius or the authoritarian Hsüntze. These sayings, which were probably written down by his pupils under his own supervision, show Mencius to be a master of debate, who used his great abilities to propagate and defend the Confucian teachings. Coming from one of the best families, he refused to bend before any of the princelings and kings who abounded in China of that day, and uncompromisingly preached to them the Confucian teaching that a ruler must govern for the benefit of his people, otherwise he can be rightfully overthrown. This teaching has helped powerfully to make China on the whole the best governed country in the world.

Mencius's chief claim to greatness lies in his defence of the inherent goodness of human nature, that man tends naturally to goodness as water tends to flow downward. Here Hsüntze challenged him, pointing out that such a teaching makes unnecessary any study of the authoritarian Confucian code. Hsüntze instead taught that human nature naturally tends to evil, so that it needs the Confucian teaching to correct its perversity. Chinese public opinion, caught by the flattery of Mencius, has mostly ranked Mencius higher than Hsüntze, but Confucianism adopted the authoritarian teaching of Hsüntze in harmony with its own spirit.

This translation is a great improvement upon the verbose one of Legge, which has been standard for the past sixty-odd years. Mr. Lyall has done Mencius into Anglo-Saxon, and attempted to reproduce the brilliant, concise style of his author. Therein the translation has succeeded remarkably well, considering the extreme difficulty of such a task. Brief notes explaining names and places aid the reader greatly. (A few of the longer notes, containing quotations from Goethe and others, could well have been spared.) This conciseness sometimes however makes for difficulties: for example, the Chinese word, *jen*, is throughout translated by "love"; the translator nowhere explains that this Chinese word does not mean exactly the same as the English "love." *Jen* means rather "kindness"; it denotes the kindly, benevolent attitude of the superior to the in-

ferior; Chinese uses a different word for the love of equals. It is indeed doubtful if any of the Chinese Classics can be made altogether clear without elaborate explanation—something that is not attempted in this book. Mr. Lyall has done about as much as any mere translator can do. The book is well bound, with wide margins; a concordance of subjects and one of names add greatly to its usefulness. For the average reader who knows no Chinese, yet wishes to study the message of this, one of the world's great teachers, the book can be highly recommended.

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Knowledge and Object. EDWARD F. TALBOT, O.M.I., A.M. Washington, D. C., 1932. Pp. 117.

This monograph is an exposition and defence of the Thomistic theory of knowledge.

With the Augustinian-Platonic tradition opposed to him, and with his contemporaries (e.g., Bonaventura, John Peckham, Matthew of Aquasparta) condemning his whole-hearted acceptance of the teaching of Aristotle, St. Thomas set out to elaborate a theory of knowledge on the foundation of the Aristotelian metaphysic, a theory which had been only obscurely sketched by the Stagyrte.

It is not surprising to find great value in a doctrine espoused despite such opposition. Whoever is genuinely puzzled by the problems of knowledge will do well to consult the *Quaestiones disputatae* of Thomas Aquinas. His explanation of the Aristotelian view that "*anima est quodammodo omnia*" and his distinction of that which is known (*id quod*) from that by which (*id quo*) knowledge is possible will enable the student to escape many epistemological pitfalls.

While disclaiming that St. Thomas has said the last word in epistemology, Mr. Talbot supports the Angelic Doctor's theory of knowledge with its metaphysical and theological ramifications in all its minutest details. His work is that of a disciple, and while it exhibits a thorough understanding of the master's teachings, it is singularly uncritical.

Feeling it incumbent upon him to reckon with modern epistemologists, the author falls into facile refutations made possible by a misunderstanding of the positions he criticizes. For example (p. 98):

Some would have us believe that knowledge is to be judged by a mere pragmatic test, that is, by its value. The hope of truth is entirely discarded. Not *what is true*, but *what is useful* has become the new standard.

This does not fairly represent the position of anybody I know.

Objective relativism is disposed of (without a single reference to Whitehead or Dewey) by a patent *petitio principii* (p. 55):

... this theory teaches that all perceived data from whatsoever "stand-point" are not only attributively but existentially objective. Such being the case the penny not only appears, but actually is both circular and elliptical at the same time. That the penny is viewed from two different standpoints does not change the main contention, namely, that it is the same object of reference, the same penny.

Mr. Talbot might appreciate objective relativism better if he asked himself the question: what shape does the single permanent penny *really* have?

While he was reviewing modern work on epistemology it is unfortunate that Mr. Talbot neglected so important a contribution as C. I. Lewis's *Mind and the World-Order*.

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JOURNALS AND NEW BOOKS

REVUE PHILOSOPHIQUE. 58^e Année, Nos. 11 et 12. Lettre sur Heidegger à M. Daniel Halévy: *R. Besspaloff*. L'assimilation et le schématisme: *A. Burloud*. Essai méthodologique sur l'élaboration des faits, doctrines et pratiques de la médecine: *Dr. Técheueryres*. La force organique et la force cosmique dans la philosophie médicale de l'Inde et dans le Véda: *J. Filliozat*.

SOPHIA. Fonti e Studi di Storia della Filosofia. Anno I, N. 2. Hegel a Roma: *Francesco Orestano*. Storicismo attualista; *Carmelo Ottaviano*. Il problema dell'errore nella filosofia di B. Spinoza: *Adolfo Levi*. L'infinità dell'essere in Melisso di Samo: *Rodolfo Mondolfo*. Il realismo metafisico di Vincenzo Gioberti: *Roberto Pavese*. Le antinomie della Ragion Pura in S. Agostino: *Michele Giorgiantonio*. La dialettica in Anselmo d'Aosta: *Michele Losacco*. Il pensiero filosofico nel "De Trinitate" di S. Agostino: *Primo Montanari*.

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NOTES AND NEWS

We print below the program of the Thirty-third Annual Meeting of the Eastern Division of the American Philosophical Association which will meet December 28, 29, and 30, at Amherst College.

THURSDAY, DECEMBER 28

8:00 P.M. Informal Smoker.

FRIDAY, DECEMBER 29

9:30 A.M.

Welcome by Vice-President T. C. Esty of Amherst College
Symposium: "The Status of Mind in Reality"

Charles W. Hendel, Arthur E. Murphy, James B. Pratt

2:30 P.M.

What is Materialism? Sidney Hook
Appearance and Orientation Grace A. de Laguna
On the Attributes of Material Things C. J. Ducasse

7:30 P.M. Annual Association Dinner

Presidential Address: Experience and Meaning C. I. Lewis

SATURDAY, DECEMBER 30

9:30 A.M.

Verifiability, Truth, and Verification Ernest Nagel
The Conception of the Psyche in Plato's Metaphysics. Raphael Demos
The Universe of Light Frederick J. E. Woodbridge

2:30 P.M.

The Principles of Evaluation in Aesthetics A. Myrton Frye
Political Fictions, Norms, and Postulates Marie C. Swabey
The Concept of "Usury"—The History of an Idea.. Carl F. Taeusch

The Program of the Tenth Annual Meeting of the Pacific Division of the American Philosophical Association which will meet at the University of California at Los Angeles, December 28, 29, and 30, is as follows:

THURSDAY, DECEMBER 28

2:30 P.M.

The Concept of Karma in Vedic Philosophy *E. T. Dana*
 (Introduced by *J. Loewenberg*)

A Critique of Schlick's Claims to Standpointlessness. *P. A. Schilpp*

A Wish Theory of Art *E. A. Robinson*

7:30 P.M.

Worlds in which we Participate *H. B. Alexander*

Concatenation *William Savery*

FRIDAY, DECEMBER 29

9:30 A.M.

Symposium: "Mind, an Event in Physical Nature"

"The Mind's Excursive Power" *G. P. Adams*

The Physical Location of the Cognitive Datum *D. C. Williams*

The Reerudescence of *Physics* *W. H. Long*

Discussion *William Savery, H. C. Brown*

2:00 P.M.

Equality as a Moral Value *J. H. Tufts*

The Comedy of Immediacy in Hegel's Phenomenology
J. Loewenberg

7:00 P.M. Annual Dinner

Presidential Address: Functional Realism *J. E. Boodin*

SATURDAY, DECEMBER 30

10:00 A.M.

Thought and Analysis *E. W. Hall*

The New Materialism—A Critique *H. L. Searles*

The Self and its Object in Racial Cultures *E. D. Starbuck*

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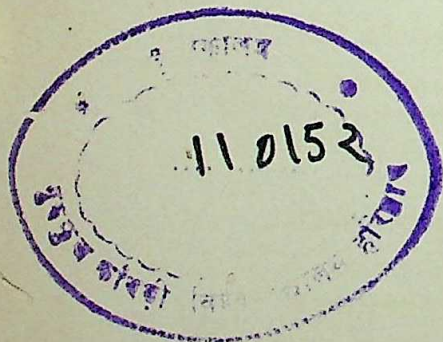
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